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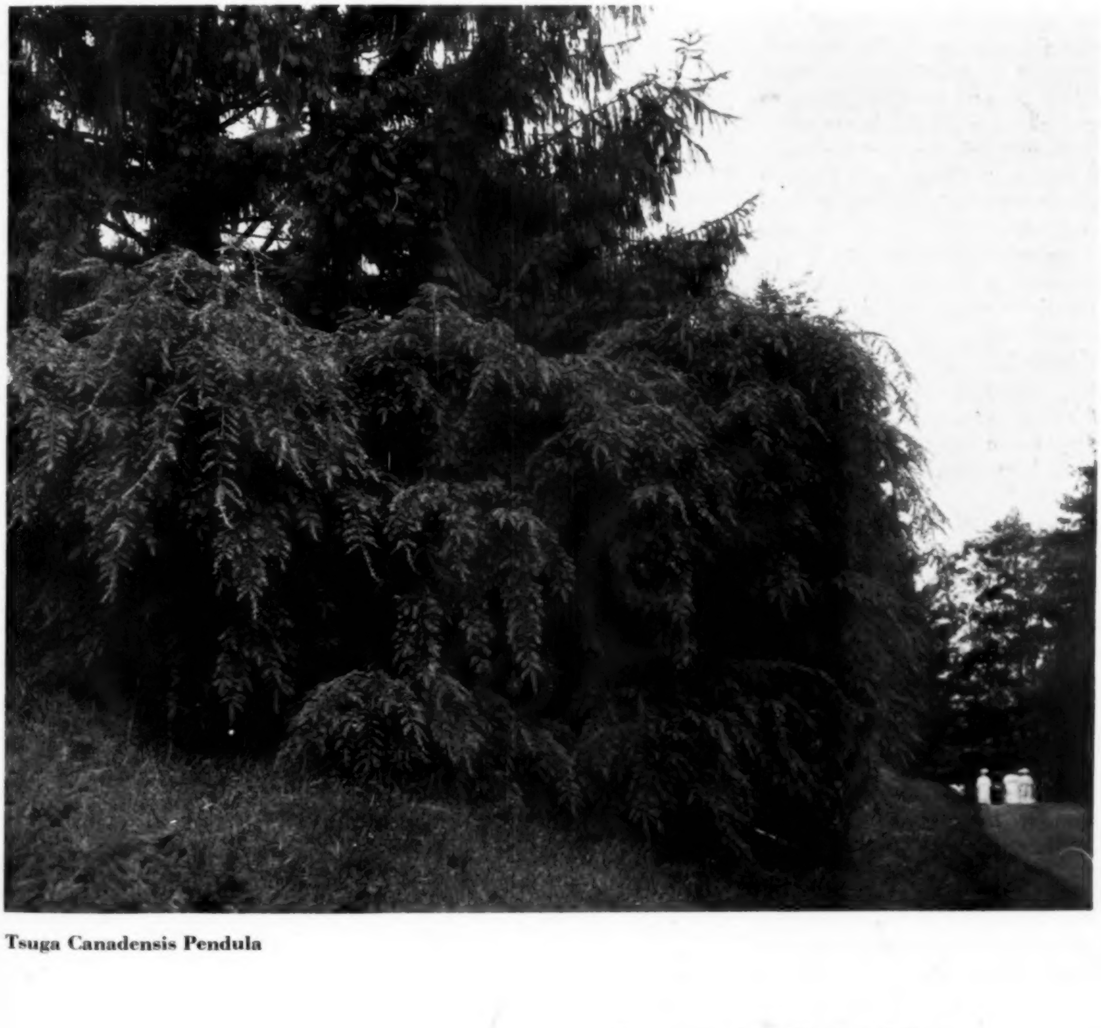
# AMERICAN NURSERYMAN

*The Nurseryman's Forte: To Make America More Beautiful and Fruitful*

**MAY 1, 1941**



**Tsuga Canadensis Pendula**

**Propagation Under Mist**
**Home Planted by Better Standards**
**Selection of Broad-leaved Evergreens**
**Florida Tests Camellia Varieties**

AMERICAN NURSERYMAN

F. R. KILNER, Editor

## Editorial

### WHICH IS WHICH?

If a suburban homeowner, or his wife, driving down the street noticed one crew of men planting some evergreens in a lawn here and another crew putting in a new hedge at another place, would he or she stop the car, get out and walk over to the workers to inquire what nurseryman was doing the work?

The sight of these planting jobs being done might stir thoughts of similar improvement in the motorist's own home grounds. But he might not have time to stop and watch to see which crew did the better work. If a shiny truck carrying the name and address of "John Smith Nursery Co." were parked in front, perhaps the address would be jotted down, and an inquiry would result. Or if the truck were a dilapidated unpainted affair, the motorist would drive on, not interested in the "wheelbarrow landscaper."

But if no truck was parked in front and both crews were of similar earthy appearance in their dungarees or old clothes, how would he know which was which?

Of course, the "wheelbarrow landscaper" can't afford to provide an attractive sign, much less put his men in uniforms. Besides, he wouldn't want the prospect to call at his so-called place of business. For his job depends on a house-to-house canvass and a fast line of conversation, coupled with low prices.

The passing motorist, if he saw an attractive sign, "This landscaping being done by John Smith Nursery Co.," when the shiny truck was not there, might telephone for an appointment or call at the nursery, giving his order to this firm before the "wheelbarrow landscaper" with his fast line of conversation called at that house.

The responsible, honest-quality nursery firm can eliminate at least part of the shyster competition by letting the public know which is which. Are you making as strong an effort as you can to help the public choose the kind of planting you can give?

## The Mirror of the Trade

### WHERE DO YOU GET IDEAS?

At their state meetings and other conventions, nurserymen like to talk over their problems with friends in the trade, and every so often out comes the vest-pocket notebook so that an idea may be jotted down for action on return home. The man who stays home just because the program of his state meeting does not offer a speaker on his particular phase of work is losing this fertile means of getting new ideas.

At home the head of the business gathers ideas by keeping an eye on the mail—all the mail, and not just that containing big orders, hot prospects and personal communications. Even circular mail, price lists and solicitations, no matter what the source, may yield ideas on new sources of supply, something new in advertising or another avenue for selling. To let a clerk file such material or throw it in the wastebasket is like staying home from a convention and avoiding the prospect of making new acquaintances.

### TO CURTAIL PLANT LISTS.

Even in wartime, new forms and varieties of plants make their appearance in the English trade. Indeed, attention is being given there to curtailing the list of varieties, recognized abroad as well as here as overlong. Commenting on this proposal, the Horticultural Trade Journal, published in London, England, has the following to say:

"While most nurserymen appreciate the value of lessening the number of varieties of roses, for example, or possibly of apples, there is not unanimity of opinion as to how it shall be brought about. The Horticultural Trades Association is about to make the attempt and has appointed several experts to deal with various sections of hardwooded plants. Taking trees and shrubs, with the possible exceptions of two or three varieties of deutzia and maybe philadelphus, there does not appear to be any need for pruning. There is room for the deletion of varieties of apples, possibly plums and most certainly roses. Much depends upon the way in which the task is tackled. It is suggested that it might be better to provide lists of what are considered to be the best hundred trees, shrubs, varieties of roses and so on, the number selected in each section depending upon the number of varieties available."

### BUILD MORE SPITE OF COST.

Despite advances in building costs, F. H. A. small home insurance applications in April established a new record. During March, the number of small home mortgage applications totaled 30,040. This compared with the 28,811 applications received during the previous high month of May, 1940. The demand for F. H. A. mortgage insurance is so heavy that the agency is seeking funds from Congress for expanding its forces further.

Rising building costs apparently are having little if any effect on private home building yet. Building costs have now risen 9.5 per cent since last April, according to a survey by Dow Service, Inc. The increases in costs vary widely in different areas, according to the survey. In New York city, for example, costs are up only three and one-half per cent. Higher labor and lumber costs have been largely responsible for the advances.

### HELPS 4-H CLUB MEMBERS.

One nurseryman who had no need of the editorial urging in the April 15 issue to foster the 4-H clubs' home beautification project is Ray Filk, proprietor of the Filk Evergreen Nursery, Biscay, Minn. He offered a free spruce tree in the twice-transplanted, 10 to 12-inch size, balled and burlapped, to every 4-H club member enrolled in the home beautification project in his county, who numbered about seventy-five boys and girls. In addition, each club member whose tree is living and thrifty October 15 will be given a 2-year-old No. 1 rosebush for fall planting or a 3 to 5-eye peony.

IN the village elections last month, Arthur L. Palmgren, of Palmgren's Nurseries, Glenview, Ill., was elected a trustee of Glenview.

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Your advertising problem is to get your offers **read** by the prospects who are **interested** in your merchandise. The problem is solved by the medium that not only reaches the prospects, but is read closely by them, like this: **"The American Nurseryman has produced more inquiries than any other paper in the field,"** reports A. S. Vogan & Associates, advertising agents for Karl Kuemmerling, Canton, O., dealer in nursery and tree men's equipment.

# Propagation Under Mist

### *By Edward J. Gardner*

*While operating his nursery at West De Pere, Wis., Edward J. Gardner has had his inventive genius stimulated by contact with his brother's metal works. The method of propagation he describes here has produced experimental results that warrant further trial to discover its practical application.*

Through experiments conducted during the summers of 1939 and 1940, I discovered an efficient and labor-saving method of rooting green cuttings. Handled under a gentle foglike spray, fully leaved cuttings of shrubs, trees and perennials in all stages of growth remained fresh and vigorous with practically no attention. Roots struck in a few days on some sorts, while slow-rooting kinds kept in fine condition until rooted.

It was nearly the end of July in 1939 before I was convinced that at least some plants would propagate satisfactorily under a continuous spray, but in the short time left that season sixty-one species and varieties of ornamentals were tested, with and without chemical treatment. Of these, only five failed entirely; the remaining fifty-six rooted from twenty to 100 per cent, the greater number near the higher mark. What seemed most remarkable was that ordinarily difficult subjects, such as flowering almond, Euonymus alatus, styrax, etc., rooted 100 per cent, producing fine strong plants.

And of the five that I had failed to root in 1939, a time for taking the cuttings or a treatment was found that resulted in 100 per cent success for every one in 1940. In all, 194 species and varieties of shrubs, trees, perennials and evergreens were tested in 1939-40, many of these items repeatedly, and out of that number only thirteen kinds failed entirely to root.

In my experiments I attempted to find the optimum time and condition for cutting the material, the best type of cutting to use and the effect of various root-inducing chemical treatments. Several types of cuttings for nearly all of the 194 sorts tested were tried, as were various treatments. A complete report on all tests is impossible in this article, but I shall endeavor to describe the essentials of mist propagation clearly and briefly.

For a propagating house a shaded greenhouse is desirable but by no means necessary. In 1939 I used a lean-to glasshouse at De Pere, Wis., and in 1940 a tentlike structure covered with waxed cloth at Horicon, Wis., about 100 miles distant. A glasshouse is preferable in fall, as more sunlight is admitted; in summer the cloth house proved every bit as satisfactory. The cloth house 12x15 feet cost but $25 complete. The size of house needed will depend on the number and kinds of plants to be propagated. Large-leaved cuttings may be crowded if set twenty to the square foot, while small-leaved kinds, such as barberry, cotoneaster and alpine currant, were set 100 to the foot and had ample room. On the average, I set about seventy assorted cuttings in a 12x24-inch flat.

The number of batches that can be rooted in one season on a given space will depend on the rooting time of the items being handled. Of the quick-rooting sorts, if the first cuttings are taken early, it is possible to grow five batches in a season, while with slow-rooting kinds only one or two can be propagated.

The prime necessity is to have the propagating benches under a constant, fine, foglike spray. In 1939 I used fixed nozzles, which were satisfactory, but covered only twenty square feet of bench space per nozzle, and air currents often carried the mist away from the cuttings. Last summer I installed eight fixed nozzles in the cloth house, but they left dry strips and used too much water. I then developed a tiny water-powered outfit that rotated a nozzle so that every part of the house, an area of 180 square feet, was kept saturated at all times with a water consumption of only eight to twelve gallons per hour.

No drainage of the propagating house was provided in my experiments, as the soil took up the water as fast as it fell to the floor. With a more impervious floor, the daily fifty or more gallons of waste water (the rest evaporating) may become a nuisance if drainage is not provided.

For large-size propagating houses the nozzle units should be spaced about fifteen feet apart and at least two and a half feet above the cuttings to ensure that all bench space is kept saturated. Three feet or more would be even better. With this spacing, each unit will care for 225 square feet, or with space out for walks, about 180 square feet of cutting bench, which will accommodate 4,000 to 18,000 cuttings at a time, depending on the size of the foliage on the material used.

It is really not necessary to maintain a foglike atmosphere exactly. In 1939 the stationary nozzles did just that, but the rotary nozzle used last season kept the cuttings in as good condition with the spray passing over them two to four times per minute. Apparently having the spray cover the cuttings just often enough to keep the leaves wet is enough. On excessively hot days the moisture on the foliage dries with surprising rapidity and coverage by the spray should be at least every half minute. On hot days the cuttings wilted quickly after the foliage dried, but on cool days it was possible to shut off the water for considerable time without any noticeable effect.

The preparation of cuttings for rooting under mist is somewhat different from that for the old method of summer propagation. I found that only a few species would not root except from heel cuttings, that a heel seemed to slow up rooting with others and that with most varieties the position of the cut made so little difference that it is a waste of time to pay attention to the location of the cut.

For about ninety per cent of the plants tested, the following directions cover the preparation of the cuttings completely:

Snip the tips of new shoots or cut up long young sprouts into short sections. Do not trim off any foliage; the more leaves left, the quicker the cuttings root. The length of the cutting does not seem important; 4-inch to 6-inch cuttings are easiest to handle. Foot-long slips rooted as well, but seemed a waste of material and were harder to handle. If cutting material is scarce, make single-leaf cuttings; they root well, too; in fact, dewberry and boysenberry rooted best from such cuttings. The vigor of the cutting material is more important than the condition of the growth. Soft green tips rooted best with a few subjects; others rooted only from well ripened wood, but with most material little difference was noted.

Set the cuttings in clean, coarse sand under the mistlike spray. Forcing the cutting into the sand may cause injury; so punch a hole in the sand and set the cutting just deep enough to hold it firmly upright. If you do not have time to set the cuttings when made, just spread them out thinly under the spray and set them the next day or the next week. It does not matter much; they will keep healthy and actually grow and often root without touching the sand.

For convenience in handling, I placed the sand in standard flats, these being placed on bare benches, but I believe that benches filled with sand would work as well. Although a coarse washed sand is preferable, as that allows the water to drain away quickly, this is not absolutely necessary because cuttings in a sand and peat mixture and also those in fine unwashed sand that drained poorly seemed to do as well as those in the well drained flats. However, the cuttings were easier to place in the coarse sand and remained in an upright position better.

No care of the cuttings is required while they are rooting; the foglike spray takes care of them. Just turn on the water in the morning and shut it off at night if you want to be saving; otherwise, let it run constantly, for I could see no difference either way. It seems safer to leave the spray running nights than to risk forgetting to start it in the morning.

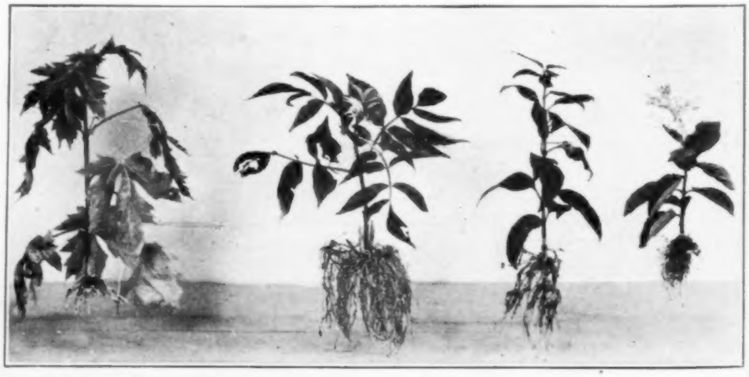
The propagation work was carried on under prevailing summer and fall temperatures, the house being unheated. And in October the cuttings were frequently frozen at night and rooting was slowed up considerably, though many items rooted well even under these conditions. In summer, the house temperatures usually averaged only a few degrees higher than outdoor readings, because of the cooling effect of the mist. Outdoor temperatures during 1939 varied from 72 to 89 degrees, while those in the house ranged from 74 to 98 degrees. The relative humidity outdoors ranged from 30 to 58 per cent, while that in the house varied from 66 to 91, with an average in the 80's.

Best results are obtained by keeping the cuttings in the propagating house until a good root system is formed, before transplanting them to outdoor beds, because the newly formed roots are extremely brittle and are difficult to handle. However, more mature plants can be handled with little root damage.

Cuttings of valuable plants should be planted in wood bands filled with sand and peat as soon as rooting has started and allowed to remain under the spray until roots appear at the bottom of the band. These plants may then be transplanted to outdoor beds without danger of loss. Several hundred plants were treated in this way in 1939 without a single loss. Young plants in pots or bands may be held for months under the spray and will flourish. June-started plants of a number of items were kept in the house until November and all grew well. The 4-inch cuttings of purple plum and several roses were eighteen inches tall when removed in November. Many cuttings in wood bands were wintered in a regular storage cellar with little loss. I should advise this treatment for cuttings rooted late in the season.

Having had experiences with damping-off and other diseases in growing cuttings by the old method, I was extremely skeptical that growing them under a continuous spray would be successful. I expected that the foliage would blacken and rot and molds would destroy the plants. So to learn the worst as quickly as possible I disregarded all the usual sanitary practices to prevent disease. Untreated sand was placed in old, unsterilized flats and the same sand was used without any treatment for the full season's experiments. Cuttings were removed as they rooted and new ones were set immediately to replace them. The removal of cuttings that died and any of the leaves that fell was the only sanitary measure practiced. It seems, therefore, the fine, foglike spray is so highly oxygenated that it acts as an antiseptic.

Sunlight, of course, is necessary, too. This was made apparent by the difference in the 1939 and 1940 experiments. In 1939 a glasshouse was used, shaded with heavy cloth. In September, when the days were shorter, the cloth was removed and replaced with a light cheesecloth, allowing almost full sunlight. In 1940 the house made of waxed cloth became quite dark and soiled by fall, cutting down the light appreciably. At the close of the first year's test the sand was fresh and sweet, while the past season the sand had a musty odor and moldy appearance where it came in contact with the wood of the flats. However, the plants did not seem to suffer, except that the root tips were blackened where they touched the moldy sand. For this reason, I feel that where fall propagation is desired, a glasshouse should be used, or if a cloth house is used, the soiled cloth should be replaced with clean new material about September 1.

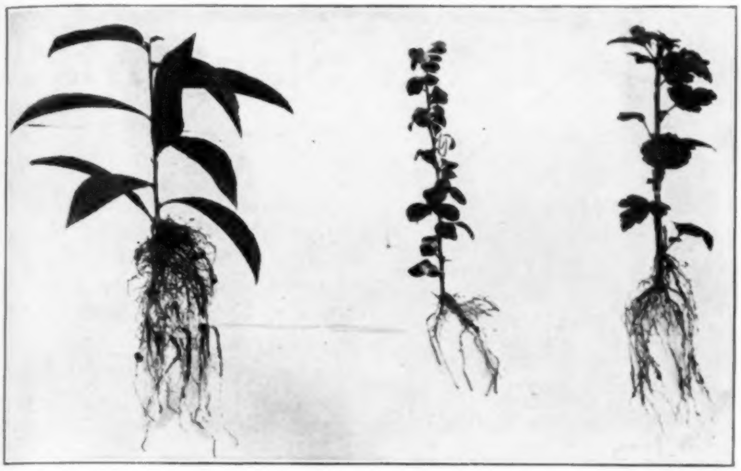


Left: Golden soft maple, cut September 5, rooted September 16; 29 roots; no treatment.

Left center: Golden elder, cut August 16, rooted August 26; no treatment.

Right center: Forsythia viridissima koreana, cut August 16, rooted September 6; no treatment.

Right: Hydrangea paniculata grandiflora, cut (in bud) August 22, rooted September 6; treatment, 5 c.c.



Left: Prunus japonica alba, cut August 16, rooted September 6, planted in wood band September 6 and set on flat of sand; roots through band to bottom of flat when removed for photograph; roots about seven inches long; no treatment.

Center: Red Japanese barberry, cut September 3, rooted September 24; no treatment.

Right: Ribes alpina, cut August 16, rooted September 6 and planted in band same as almond; treatment, 5 c.c.

While treatment with root-inducing chemicals is unnecessary for many species and apparently even harmful to a few sorts, my experience indicates that such treatment is beneficial to most varieties and that some will not root without chemical help. In the first season's trials, liquid treatments of many strengths were used, but because of the difficulty and time required for liquid treatment, powder only was used last season. Four different trade preparations were used, and in all cases an untreated batch of cuttings was employed as a check.

Named lilacs, flowering crabs and the purple-leaved and fruit plums responded splendidly to the strongest treatment and were slower and produced fewer roots when the lowest-strength powder or no chemical treatment was employed. Hydrangea P. G., roses and alpine currant did best with mild treatment, whereas barberry preferred none at all.

The amount of material of an item used varied greatly. Some of the more important plants or those difficult to propagate were tested in large numbers, whereas only small batches were tried of items of little value or easy to root by other methods. Only a few cuttings were available of a few plants tested. Usually at least twenty-five cuttings were used for a batch divided into lots of five for each of four chemical treatments and the check.

Red barberry, alpine currant, Hydrangea P.G. and Euonymus coloratus were tested in batches of 100 in 1939 and most of the prunuses and some roses in lots of fifty. Last year I was more interested in trying as many varieties as possible as many times as I could, hoping thereby to find the optimum time for taking the cuttings of varieties particular in their requirements. Cornus elegantissima and Prunus triloba were used in batches of 100.

This article could hardly be closed without mention of my experiences in transplanting shrubs in active growth by the use of the spray treatment and in holding dormant stock under the mist. In August, 1939, it was necessary to move some named lilacs and other shrubs. Shortly before, a good rain following severe drought had forced the plants into extremely active growth. Though kept wet and reset a few minutes after being dug, the plants wilted badly, many losing their foliage entirely, and it was apparent that it would be necessary to check the growth and harden the shrubs before planting to prevent excessive losses. The way that extra-soft cuttings responded to the spray suggested that such treatment might be the solution to the problem.

Several shrubs in active growth were dug and placed under the spray in the cutting house. Left there for several days and then transplanted to the field and well watered, these plants remained fresh and healthy without even the new growth wilting, despite the dry, hot winds prevailing. Thereafter all shrubs with soft growth were given this treatment, with the same satisfactory results, and it was possible to carry out planting jobs that otherwise would have had to wait until frost checked growth. At least a month was added to the planting season that fall.

Last fall the space under the benches of the experimental house were used to store bare-root peonies, perennials and shrubs until they could be planted out. Some were held for a month or more, but were in perfect condition when used. This method of handling is much easier and cheaper than heeling in the plants or packing them in peat or moss, and the danger of damage to fragile roots is greatly lessened.

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## RECOMMENDED LISTS.

One of the features of the annual meeting of the Northern Retail Nurserymen's Association, held last February and subsequently reported in these columns, was the appointment of three committees to prepare recommendations as to fruit varieties, lilacs and ornamentals. The lists adopted by the association have been forwarded in mimeographed form to members. The recommended fruit list, prepared by a committee consisting of J. D. Winter, J. K. Andrews and John Hawkins, is a lengthy one and of primary value in Minnesota and adjacent states.

The list of French lilacs recommended by the committee comprising A. M. Brand, Robert Wedge and K. D. Andrews includes the following: White—Mme. Lemoine, Mme. Casimir Perier; blue—Alphonse Lavallée, President Grevy, President Carnot; red—Charles Joly, Souvenir de Ludwig Spaeth; pink—William Robinson, Belle de Nancy, Charles X, Katharine Havemeyer, Ruhm von Horstenstein.

The same committee presented a brief list of varieties of shrubs, trees and evergreens to be eliminated, as follows: Flowering almond, sand cherry, tree form hydrangea, Philadelphus grandiflora, Spiræa callosa alba, Chinese elm for landscape, common black locust, silverleaf poplar, Russian golden willow, Swedish juniper, spiny Greek juniper, Norway spruce, white spruce.

---

JOE MYERS has opened a nursery and landscape service at Fifty-third and Western avenues, Britton, Okla.

# Home Planted by Better Standards

*By George Jennings*

*The complete landscape planting of the grounds of a moderate-priced home by his firm, New Jersey Foresters, Ralston, N. J., according to the principles formulated by the New Jersey association's committee to set up standards for better planting, is described by the chairman.*

The opportunity to select the location of a home site, attend to the excavation and grading, design the grounds and do the planting, all in accordance with his best judgment, is rarely given to a nurseryman. Such an opportunity provided the occasion to carry out the conclusions of the committee of the New Jersey Association of Nurserymen to set up standards for better planting. The report of the committee which I presented as chairman at the summer meeting last year [published on page 2 of the October 15, 1940, issue of the American Nurseryman] was considered of such interest as to warrant the continuation of the committee, of which the other two members are Roland de Wilde and William Hallicy, and allotting to it a session for the exposition of its ideas at the winter meeting, as was reported in this magazine for February 1 and 15 of this year. In the quotation of the committee's report in the latter issue, the following standards were offered for better style in plantings for the home costing less than $10,000:

"We urge that landscape treatment be considered and tentatively planned before the house is started.

"Landscaping should properly include best grades for drainage and prevention of erosion, location of house, driveway and paths, selection and use of plants to increase the attractiveness of the house and grounds, adequate soil conservation and preparation."

At the winter meeting slides were used to show many views of the progress of the construction of the home and landscaping of the grounds on a job where I sought to carry out these aims. Three reproduced here show the most important stages.

The example illustrated the importance and necessity, if economy and best results are to be attained, of engaging landscape services before ground is broken for the house.

Under an unusual set of circumstances I was given a green light to go ahead and handle the landscaping as I thought it should be done. The house, including land and finished landscape, cost under $10,000. Of this, $1,000 was allotted for landscaping, which included stripping the topsoil, excavating for the cellar, rough grading the area including driveway, installing tile drains for all downspouts, finished grading and lawns and a finished driveway.

The cost of the foundation work as listed above was $487.50 and was billed at cost. The building contractor refunded to me $175, which he had included in his contract for excavation, grading and driveway. He had included nothing for planting.

The owners consulted my opinion in the selection of a lot. While their own judgment inclined them toward the lot chosen, they were also favorably inclined to a lot within a piece of woodland of large trees which would have involved difficulties in adjusting grades to existing large trees. To do so, in my judgment, would have been too expensive for the type of property planned.

The lot had a natural background of large oaks, red, scarlet and black, approximately seventy-five feet tall, with a mixed stand of Jersey pine (Pinus virginiana), red maples, small oaks and bayberry as a foreground to the large trees. This fine woodland was perfectly situated at the back of a lot 200 feet deep and 110 feet wide. The land is relatively high and well drained. The soil is sandy loam, but high in organic content and very acid, 4.5 to 5.0 pH.

My one claim is that I have utilized a natural setting for a house and have emphasized the natural attractiveness of the surroundings, which is one of the major recommendations of the committee.

The charge for landscape planting at my usual rates included material, planting, plans, supervision and complete guarantee for one year and was $766.50. The itemized bill was as follows:

CONSTRUCTION

| | |
|---|---|
| Topsoil stripping, bulldozer 6 hours | $ 24.00 |
| Transportation of bulldozer | 10.00 |
| Digging cellar | 53.00 |
| Rough grading, bulldozer ½ day | 27.00 |
| Rough grading, handwork, including tile drains for all downspouts and 1 drainage catch basin, 18 days @ $5.00 | 90.00 |
| Glazed tile | 10.00 |
| Driveway, 1,000 sq. ft., special grading, hand labor, 3 days | 15.00 |
| Cracked stone | 28.50 |
| Finish grading, 8,000 sq. ft., seeding and rolling | 118.00 |
| Additional topsoil and spreading | 83.00 |
| Grass seed, 50 lbs. | 15.00 |
| Lime, 800 lbs. | 6.00 |
| Fertilizer, 400 lbs. | 8.00 |
| | $487.50 |

PLANT MATERIAL

| | | |
|---|---|---|
| 1 | White pine specimen, 16-foot | $ 60.00 |
| 1 | Norway spruce specimen, 18-foot | 75.00 |
| 2 | Yews (Taxus cuspidata nana), 3 to 4-foot specimens | 50.00 |
| 2 | Japanese hollies (Ilex crenata), 5-foot specimens | 20.00 |
| 1 | Yew (Taxus cuspidata), irregular shape, 5-foot | 15.00 |
| 1 | Douglas fir, 8 to 10-foot | 15.00 |
| 21 | Douglas fir, 3 to 8-foot (hedge) @ $5.00 | 105.00 |
| 6 | Hemlock, 4-foot (hedge) @ $3.00 | 18.00 |
| 10 | Norway spruce, 3 to 4-foot @ $1.50 | 15.00 |
| 2 | White dogwoods, 8 to 10-foot | 25.00 |
| 1 | Pink dogwood, 8 to 10-foot | 25.00 |
| 2 | Crabs (Malus atrosanguinea), 8 to 10-foot specimens | 25.00 |
| 2 | Elms, 5 to 6-inch diameter | 50.00 |
| 1 | Washington thorn (Cratægus cordata) | 10.00 |
| 12 | White birch (Betula populifolia), 6 to 10-foot | 25.00 |
| 3 | Euonymus japonicus, 3-foot | 15.00 |
| 1 | Hemlock, 10-foot | 20.00 |
| 3 | Hemlocks, 4 to 5-foot | 15.00 |
| 6 | Laurel, 3 to 4-foot, nursery-grown | 30.00 |
| 4 | Holly (Ilex opaca), 2 to 3-foot | 10.00 |
| 10 | Lilacs, assorted (hybrids), 6 to 8-foot | 100.00 |
| 2 | Japanese holly (Ilex bullata), 3 to 4-foot | 25.00 |
| 1 | Flowering cherry (Prunus J. H. Veitch), 6 to 8-foot | 7.00 |
| 3 | Blueberry, 3-foot | 9.00 |
| 1 | Euonymus alatus, 4 to 5-foot | 2.50 |
| | | $766.5 |
| | Construction and lawns | 487.50 |
| | | $1,254.50 |

The actual cost of construction, topsoil stripping, excavation of cellar, rough grading, driveway, finish grading and lawn was $487.50; after deduction of contractor's refund, it was $312.50.

The house is on the Lippman tract, Edgebrook, New Brunswick, N. J. The illustration at the right shows the location for the house September, 1939, before breaking ground.

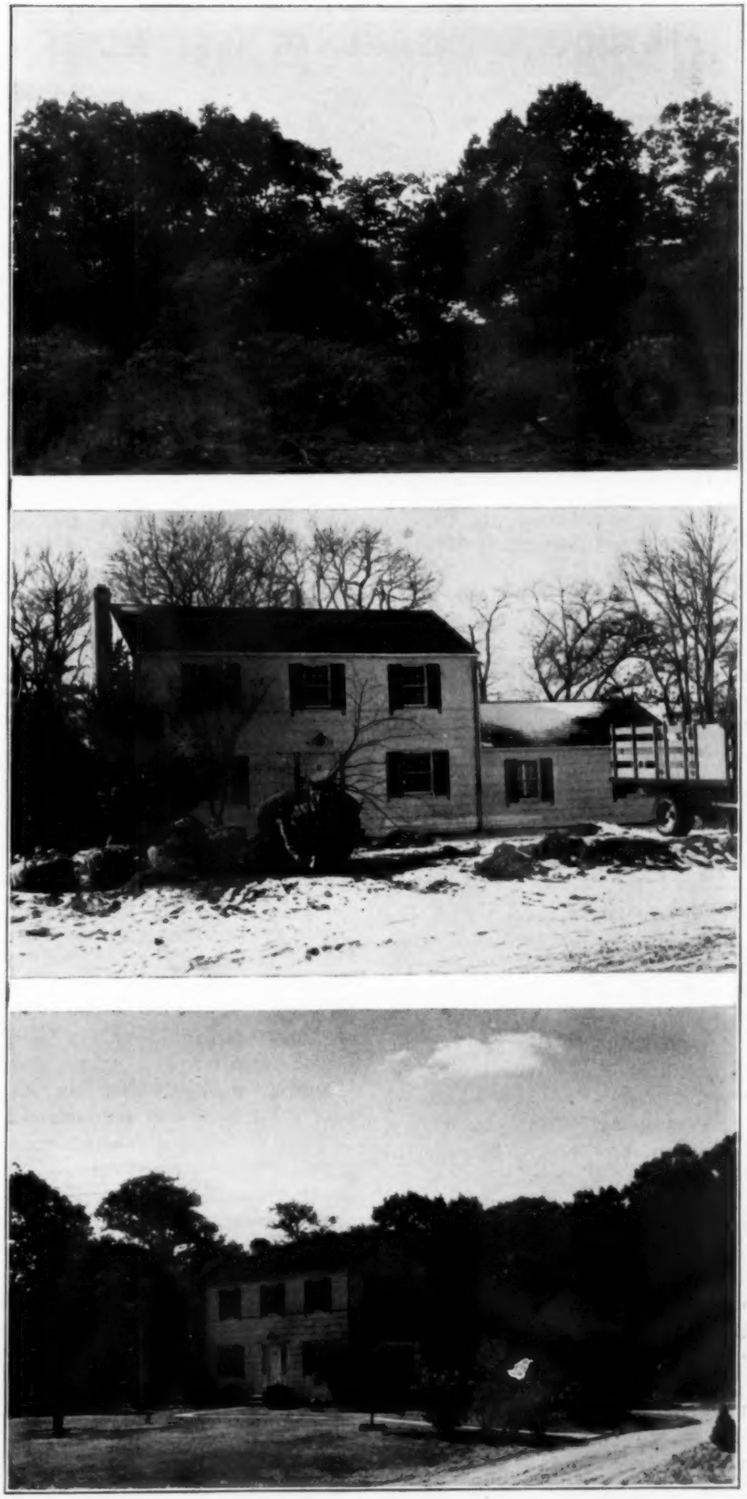
The first step was stripping topsoil from the area on which the house was to stand, as well as a 10-foot strip outside the foundation lines and a space 40x75 feet to be terraced as a garden area. A powerful Diesel engine bulldozer was used on all large-volume soil movements.

The middle illustration shows the planting of large-size elms, dogwoods, white pine and spruce, handled with ample balls of soil on a cold day in December, when the ground was covered with snow, sometimes considered an unfavorable time to plant, though I consider December, January and February good months in which to plant provided it is done by skilled workmen.

The bottom illustration shows a final view of the finished house, lawn and landscape planting as it appeared from the street in July, 1940, ten months after ground was broken.

It may be said that this demonstration of better planting is too ambitious for the average home costing under $10,000. Apparently it is at present, but it should not be. The people who are building and buying these houses have better than ordinary earning ability. They have amazingly well developed taste and desires for houses, furnishings and equipment. They buy occasional pieces of furniture that cost as high as $100. How they do it I don't know. The fact remains that they do buy what they eagerly desire, but their desire for more than the cheapest apology in landscape planting seems to be passively latent. This seems to be the final stage of the problem.

The committee to set up standards for better planting outlined the general problem in its first report. In our second report we indicated what we mean by better styles in planting. We have offered in evidence examples of poor planting and of good planting. We have shown by example and demonstration how a good landscape job should proceed.



Top: Property before Excavation, Showing Natural Woodland Setting.
Middle: Planting Trees with Balls of Soil in December.
Bottom: Finished Planting and Lawn in Following July.

If the N. J. A. N. is satisfied with the progress of the committee thus far and wishes us to finish the job, we shall in our next report endeavor to deal with the most difficult part of the problem, that of bringing to market the latent desires for better planting on the part of the public.

# AMERICAN ASSOCIATION OF NURSERYMEN

**RICHARD P. WHITE,**
**Executive Secretary**

**636 Southern Bldg.,**
**Washington, D. C.**

## MOTOR TRUCK RULES.

Copies of the revised edition of the motor carrier safety regulations issued by the Interstate Commerce Commission, applicable to private truck operators engaged in interstate commerce, are now available. One copy will be supplied to each subject carrier by the commission's general management office. Additional copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at a price of 20 cents per copy. Firms which have not been sent a copy of the regulations by the commission may, if they engage in interstate transportation, apply to one of the local field offices, in the principal cities of the country, for advice and for a copy of the regulations.

While private carriers are not required to register with the commission, or to file formal application of any kind, information is asked as to type of commodity transported, territory generally covered by motor vehicle operations and number of vehicles engaged in interstate commerce, if communication is made to the commission.

The Interstate Commerce Commission does not recognize nursery stock as an agricultural commodity, and at the present time nurserymen are subject to the regulation governing commercial privately owned trucks, which are somewhat different from the rules laid down for farm trucks. The chief differences are with regard to the age of driver, doctor's certificate, hitchhikers, hours of service and keeping of drivers' log. Attempts have been made to meet the objections of the commission to the farm status claimed by nurserymen, but so far they have been unsuccessful. The I. C. C. bureau of motor carriers puts the burden of compliance on truck owners.

The wage and hour division of the United States Department of Labor still claims application of the minimum wage provisions of its law to private motor carriers, even though the maximum hour provisions are subject to the I. C. C. regulations.

Senator Chan Gurney, of South Dakota, has introduced a bill in the United States Senate to amend the interstate commerce act by the addition of a subsection defining the term "farm." If passed, this amendment would define a farm as including nurseries, and trucks hauling nursery stock would be subject to no more regulations than the trucks of other farmers. Nurserymen are requested to write the senators of their states in support of the bill S-975, sending a copy of the letter to Senator Chan Gurney, Senate Office Building, Washington, D. C.

## QUARANTINE PAPERS.

In thirty-two mimeographed pages, copies of papers delivered in the symposium on "Plant Quarantines as Barriers to Interstate Trade" at the annual meeting of the American Association of Economic Entomologists, at Philadelphia last December, are made available to those interested in the subject by the bureau of entomology and plant quarantine of the United States Department of Agriculture, Washington, D. C. The plant shippers' point of view was presented by Richard P. White and Lee McClain, respectively executive secretary and chairman of the trade barriers committee of the American Association of Nurserymen. Other papers were by representatives of state and federal regulatory officials.

## DYNAMIC SYMMETRY.

Landscape done in the new dynamic symmetry is the description of the planting illustrated on this page, which is the exhibit of coöperating nurserymen and landscape men at the spring show, entitled "Gardens of the Americas," at Dallas, Tex. While the picture scarcely does full justice to the garden, readers may find it worth while to study in detail to ascertain how the effect was obtained.

The design would have been much improved, admits B. E. Williams, if the entire background had been of trees.

The Dallas nurserymen and landscape firms which joined in the coöperative display were A. K. Galloway, Home Service Co., Lang Floral & Nursery Co., Ramsbottom Landscape Co., Farber Nursery Co., Texas Nursery, Van Valkenburgh & Vogel, B. E. Williams Floral & Nursery Co. and Wynne B. Woodruff.

TWO sheds and some evergreens on the nursery at Darien, Conn., of Lewis & Valentine, Rye, N. Y., were destroyed by a grass fire sweeping over ten acres of the property April 4, with a loss of $5,000.

THE group meeting of nurserymen at the convention of the Florida State Florists' Association, at the Hotel George Washington, Jacksonville, will be in the charge of M. J. Soule, St. Petersburg. The group will meet in the afternoon on the two convention days, May 19 and 20, following general association sessions in the morning.

Dallas Nurserymen Construct Garden Exhibit in Dynamic Symmetry.

# Selection of Broad-leaved Evergreens

*By L. C. Chadwick*

*Small types of broad-leaved evergreens, ranging from four to five feet in height, are discussed in this fourth article in a series similar to the treatment of narrow-leaved evergreens and of woody deciduous ornamental plants in "Compiling a New Nursery List" by associate professor of horticulture at Ohio State University.*

The small types of broad-leaved evergreens, those ranging from four to five feet in height, are among the most useful of the broad-leaved evergreens for landscape plantings. The readiness with which the plants in this group attain the height specified varies considerably. For example, Pyracantha coccinea pauciflora grows rapidly and attains a height of from four to five feet quickly. Berberis julianae and Mahonia aquifolium might be classed as intermediate in their rate of growth, while such plants as Pieris japonica and Rhododendron carolinianum are comparatively slow in attaining their mature size.

These types of broad-leaved evergreens are adapted to many uses. They show a wide variation in growth habit, foliage, flower and fruit, thus accounting for their wide adaptability. They are used extensively as foundation plants, for borders and for beds. Many of them make wonderful specimen plants, while others can be used as hedges or low screens. Some types, such as the rhododendrons, are specific as to soil requirements, while others, such as the firethorn and Oregon hollygrape, are not so particular as to soil and environmental requirements.

Forty-seven species and varieties are listed. This list would be considerably greater if the hybrid rhododendrons were listed individually. Approximately twenty-eight per cent are in the selected list and should be used most abundantly. The sixty-two per cent in the secondary list will find a more limited use or need further trial. Approximately ten per cent are suggested as discards. As in the previous articles, some types which have been suggested as being useful in the upper south are included in the secondary list and indicated by the letter (S).

The classified list is as follows:

### SELECTED LIST

Berberis chenaulti—Chenault barberry.
Berberis julianae B.P.I. — B.P.I. wintergreen barberry.
Berberis triacanthophora—Threespine barberry.
Buxus sempervirens Lynn Haven—Lynn Haven box.
Ilex glabra—Inkberry.
Leucothoë catesbaei—Drooping leucothoë.
Mahonia aquifolium—Oregon hollygrape.
Pieris japonica—Japanese andromeda.
Pyracantha coccinea pauciflora — Small-flowered firethorn.
Rhododendron carolinianum — Carolina rhododendron.
Rhododendron carolinianum album — White Carolina rhododendron.
Rhododendron catawbiense—Catawba rhododendron.
Rhododendron, hybrids—Evergreen hybrid rhododendrons.

### SECONDARY LIST

Berberis atrocarpa.
Berberis buxifolia.
Berberis gagnepaini.
Berberis julianae.
Berberis sargentiana.
Berberis soulieana.
Berberis veitchi.
Buxus microphylla japonica (S).
Buxus sempervirens handsworthi.
Cotoneaster lactea.
Cotoneaster pannosa (S).
Cowania stransburiana.
Euonymus kiautschovica (patens).
Kalmia latifolia obtusata.
Ligustrum quihoui (S).
Myrica cerifera pumila (S).
Nandina domestica (S).
Osmarea burkwoodi.
Pieris japonica pygmaea.
Pieris taiwanensis.
Rhododendron catawbiense compactum.
Rhododendron mucronatum (Azalea ledifolia).
Rhododendron przewalski.
Sarcococca hookeriana (S).
Sarcococca ruscifolia (S).
Siphonosmanthus (Osmanthus) delavayi (S).
Skimmia japonica.
Viburnum japonicum (S).
Viburnum utile.

### PLANTS TO DISCARD

Berberis buxifolia spinosissima.
Leucothoë axillaris.
Mahoberberis neuberti.
Mahoberberis neuberti latifolia.
Rhododendron lutescens.

A number of the evergreen barberries fall within this size group. Only three types are placed on the selected list. Seven others are placed in the secondary list. Some of these are certainly satisfactory plants in some localities; others need more trial to determine their true worth. The evergreen barberries have attractive foliage throughout the year. Their dainty yellow flowers, with most species and varieties, add another interesting characteristic. Blue-black berries are formed by most mature plants. Many of the evergreen barberries make good hedges, as well as interesting specimens. They require a moist but well drained loam soil and will stand sun, except in dry wind-swept situations, or partial shade.

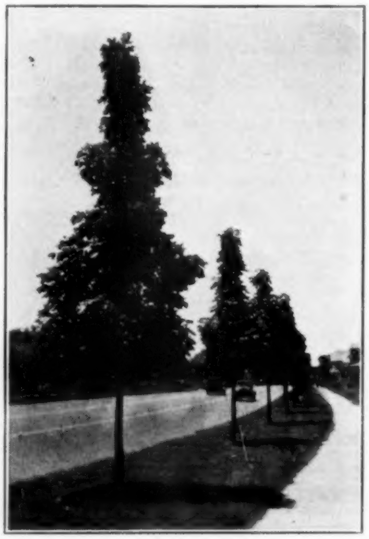
*Berberis chenaulti*, Chenault barberry, a hybrid of Berberis verruculosa and Berberis gagnepaini, has not had extensive trial, but it gives every indication of being a splendid plant, hardy in zone 5. It is of compact habit, having foliage glossy green above and glaucous beneath. The leaves are stiff, spiny-toothed, narrow-oblong and about an inch in length. It makes a fine specimen.

*Berberis julianae B.P.I.*, B.P.I. wintergreen barberry—Most plantsmen are familiar with the common wintergreen barberry, Berberis julianae. While it is a fine shrub, the type introduced by the bureau of plant introductions is considered superior to the common species. This type probably will not be designated by a varietal name and may be only an environmental variation. It seems worthy of designating the type at present, with the hope that it will become common in the trade. The B.P.I. type is more compact, is less inclined to be leggy and has slightly smaller, darker green foliage than the common species. The species, Berberis julianae, were it not for this B.P.I. type, would be on the selected list. It is often considered the best of the evergreen barberries. It is upright in its habit of growth, is often somewhat destitute of foliage at the base and has pale green stems and narrow spiny leaves, about one and one-quarter to two and one-half inches long. The evergreen barberry makes a fine low hedge or a specimen plant. It is hardy in zone 5, suffering top injury only in the coldest winters in Ohio.

*Berberis triacanthophora,* threespine barberry, is certainly one of the most interesting and graceful of all the evergreen barberries. The common name is somewhat misleading, since three-parted spines are common to a number of species. This species is a native of central China and forms a graceful plant up to four or more feet high with spreading branches, reddish in color. It is of twiggy habit and somewhat drooping. The leaves are relatively small, three-fourths to two inches long, narrow, spiny, green above and glaucous beneath. The leaves are thin compared with those of Berberis julianae. The flowers differ from those of most of the other evergreen barberries in that they are creamy-white tinged with red. Berberis triacanthophora does better than most of the evergreen barberries in full sun and is probably the hardiest of them all. It makes a fine specimen plant for foundation planting, for beds or for borders. This species is said to be none too satisfactory in Alabama.

Two species in the secondary list, in addition to Berberis julianae, which has already been discussed, are more common than the others. Berberis gagnepaini and Berberis sargentiana would in some sections be given the selected rating. Berberis gagnepaini is an upright-spreading shrub with narrow, spiny leaves, which are dark green above and light green beneath. The margins are revolute. It has not been so hardy in central Ohio as the three species in the selected list. Berberis sargentiana is also an upright-spreading species with reddish branches and oblong, spiny-toothed leaves, dark green above and lighter green beneath. Said to be among the hardiest of the evergreen barberries, it has not proved so satisfactory in central Ohio as other species. It has been reported as doing well in the upper south. Berberis atrocarpa, buxifolia, soulieana and veitchi are less common and need further trial. With the exception of Berberis buxifolia, they are listed in zones 6 or 7, which would indicate that they were doubtfully hardy in most of the territory under consideration. Berberis buxifolia spinosissima is placed in the discard list.

*Buxus sempervirens Lynn Haven,* Lynn Haven box, is not recognized by Rehder, but it appears from limited observation to be quite distinct. It needs more trial before it is definitely recommended, but it seems worthy of a place on the selected list at present. It is said by some nurserymen to be satisfactory and has proved such in our limited tests. It may become larger than the ultimate limits of this size group. In our tests it has appeared to be compact, having dark green leaves, relatively narrow in shape. Growth appears to be relatively slow, and it has given indications of being as hardy as any of the common varieties. It should make an excellent specimen plant or one for hedge planting.



Pyramidal Norway Maple.

Buxus sempervirens handsworthi, which could be placed either in group IV or V, does not seem to be quite worthy of selected rating when compared with some of the other varieties. It is upright and compact in habit of growth and has rounded dark bluish-green leaves. It should be given partial shade. Buxus microphylla japonica has little to recommend it in our locality. It is said to be one of the best boxes for sun and dry soil in the upper south.

*Ilex glabra,* inkberry, is one of the best of the broad-leaved evergreens, especially from the standpoint of habit of growth, good foliage, hardiness and general adaptability. It is a native of the territory from Nova Scotia to Florida, west to Missouri. It is a graceful shrub, with upright branches and handsome, lustrous dark green foliage turning a deep metallic purple color in sun in winter. The leaves are obovate, about an inch to an inch and one-half in length. Said to attain a height of fifteen feet under best conditions, its maximum size is more often eight to nine feet. Because of its relatively slow growth, its place in the landscape composition will come most often within this size group. Although it is sometimes rather loose, this tendency can be overcome by some shearing when the plants are small and occasionally thereafter. It prefers a rich, moist, but well drained soil and can be used in either sun or shade. It will do quite well in dry soil. An added attractive characteristic is its black fruits persisting all winter. It is most effective in masses, but can also be used as a low screen or hedge.

*Leucothoë catesbaei,* drooping leucothoë, is a native evergreen shrub from Virginia to Georgia and Tennessee. It is of slow growth, attaining six feet in height and having spreading and arching branches and large regularly arranged lustrous dark

[Continued on page 38.]

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## PYRAMIDAL NORWAY MAPLE

So much interest has been demonstrated in fastigiate trees when they have been pictured in this magazine that it seems noteworthy that a pyramidal Norway maple is being introduced as "a streamlined tree for city streets" to the public at Rochester, N. Y., by one of the older nurseries there, Brown Bros. Co., by which the photograph was supplied which is reproduced on this page.

This tree, developed by the Rochester park department, was mentioned by Dr. L. C. Chadwick in "Compiling a New Nursery List" as one of the best maples having a narrow, upright habit of growth and he termed it Acer platanoides ascendens. The same or similar trees appear as A. p. erectum or columnare.

Whatever the name, the vertical, compact structure commends the tree for street planting, while the tapering, symmetric head makes it useful as an accent plant. For background or screen it might replace the less valuable poplars commonly employed. The restricted head, producing less shade than the ordinary Norway maple, will permit normal lawn growth beneath.

# Excerpts from a Plantsman's Notebook

*By C. W. Wood*

*More comments on the usefulness, propagation and culture of less common herbaceous perennials that are of interest particularly to the neighborhood grower, tested and studied in recent seasons in the writer's nursery in the northern part of Michigan.*

### Corydalis Bulbosa.

(April 15, 1933.) Several tuberous-rooted species of corydalis are mentioned in literature (in fact, some that are usually spoken of as fibrous-rooted have woody roots which approach the tuberous state), but not many are readily available in trade channels. Of the latter, C. bulbosa (C. solida) is the one most likely to appear in American lists, though it does not show up either in lists or gardens so frequently as its merits warrant. Its principal credit is its early appearance in spring, a trait that is loved by all gardeners and especially those in the north. Here it starts its display of rose-colored fumitory flowers soon after the passing of winter's accumulation of snow, usually in early April. It sends up a frail-looking stem to the height of four or five inches, bearing two finely divided leaves, which are no small part of its charm, and at the top a cluster of flowers. These differ somewhat in color, varying from pale rose and pale lilac to deep rose and perhaps other shades that I have not seen. Anyway, there is quite a wide range to choose from, and choose one must to get really desirable colors.

It occurs, I believe, in rather open woodlands in its European home. In any event, it does best here in shady situations and leafy soil. Its habit of going dormant in June calls for placement in the garden where its passing will leave no large bare places to disfigure the landscape. Propagation is from seeds (it has selfsown quite freely here) and offsets.

### Some Unusual Campanulas.

(April 5, 1941.) If one is to judge by what is in many minds, there is an awakening of interest in bellflowers. That is a good sign, if true, for few genera that I know hold more plants suited to the varied climates embraced in the term United States and few are more charming in the garden. What makes me think that campanulas are going forward is the number of inquiries lately regarding some of the more uncommon kinds. From the answers given by mail, I have selected the following as being of most interest to readers:

Judging by the comments of inquirers and by the knowledge that the plants are somewhat similar, I suspect that Campanula Saxifraga is abroad under two or three aliases. Anyway, inquiries from different sources, one describing what I take to be C. Saxifraga under the name of C. Aucheri and another under the name of C. bellidifolia, lead to that conclusion. First of all, let me point out the differences between these three kinds, as I understand them. In bellidifolia, the corolla is glabrous on the outside, while in Aucheri it is downy throughout. Saxifraga may be told by its toothed leaves, the teeth appearing along the upper half. There is no denying the fact that these three species are quite similar, so far as garden appraisal goes, all bearing a single, deep violet bell on each stem, which in turn rises from a leafy rosette.

Another species that might be and no doubt is (I have had it as C. Saxifraga) confused with the foregoing trio is C. tridentata. It may be told, however, by the three notches (hence the specific name) in the apex of the leaf.

I have gone over my notes and found the following comments on the four kinds: C. Aucheri has large bells whose downy texture gives them an appearance of deep violet or purple satin and blooms quite early (late May or early June) on 5-inch stems. C. bellidifolia is a little smaller than Aucheri in plant and flower and has violet bells on 4-inch stems, usually from the middle of June until well into July. C. Saxifraga has large violet bells on stems varying in length from three to six inches, and though my books say it should bloom in late summer, here it makes me happy all during June. C. tridentata should be three inches tall, according to the books, but it often is double the height here; it blooms profusely in June, more sparingly later, with often another burst of enthusiasm in autumn.

As the culture of all four is quite similar, they may be taken together. And none is what the average gardener would call easy. Yet, given moisture at the root in well drained soil, they should give little trouble. Here they have done best in a mixture of sand and gravel with just enough leaf mold to supply nourishment. Although the books say to give them full sun, they will do better if given some shade during the middle of the day. Cuttings pulled away with a heel root quite readily in early spring; they may also be divided and are easy to grow from seeds.

There also seems to be some confusion when we reach the Italians, C. Elatines and C. elatinoides. I have not had either for several years and have not seen them; so I am depending on memory and a few notes. These tell me that the latter, contrary to what has been said about it, is not a difficult plant in this climate if given a well drained soil. Its downy leaves, larger than those of Elatines, resent even a hint of dampness and it is therefore best in a wall. It is also, I believe, a lime lover, while Elatines seems to prefer an acid soil. The flowers of both species have rotate corollas, as in C. garganica, and carry the ordinary campanula color, blue. They are too tender for permanent success in my section and I doubt if their finicky dispositions will ever permit their general culture in this country. If you are specializing in campanulas, you should try them, however, for you might find them of special value in your section. Even the best authorities differ in their opinions on the worthiness of the plants. The late M. Correvon thought C. Elatines one of the loveliest of the small bellflowers, while Farrer wrote: "I do not think either Elatines or elatinoides really has any conspicuous merit among campanulas, or ever could have, even if they were not tender and wet-hating."

One correspondent in Pennsylvania asked for comments on C. excisa. I wish I could say something good about its behavior, but there has been nothing in my experience to indicate that it will ever make a plant for American gardens. Its curious, nodding, pale lilac-blue flowers, with a hole at the base of each lobe, borne on 3-inch stems in June, will always lure the enthusiast on to further trials at its culture, and he will usually meet with disappointment. If you must try it, give it a gritty soil on the acid side, watered from below, and shade during the middle of the day. And divide it annually, if it lives that long.

It is a pleasure to turn from miffs to two rather unusual ones of more than ordinary charm. The first, C. Tommasiniana, makes a little bush of the height of four inches, each frail stem strung with long narrow bells of pale purple during July and August. Its blooming season is sufficient recommendation, and a cheerful disposition merely adds to its desirability. Mrs. Wilder, to whom many American gardeners look for cultural advice on alpines, wrote in her "Adventures in a Suburban Garden" that it "likes a sunny situation," but I believe that gardeners in the middle west are well advised when they are told to give it a light soil in half-shade.

The other, C. Waldsteiniana, is fairly happy under the treatment recommended for the preceding subject, though it has never been quite such a hearty doer here. It is best, I believe, to divide it every year, even when it is apparently doing well. It seems to be a rare plant in American nurseries, for one usually gets Tommasiniana when Waldsteiniana is ordered, though it is easy to tell the two apart, the former having pendulous bells, while the latter's violet-blue flowers are held erect.

That concludes the unusual kinds on which inquiries have been received recently, but it suggests the thought that notes on a few others, especially a new series from Greece and Asia Minor might be helpful. That will be done in a future issue, as soon as I can assemble my notes.

### Centranthus Angustifolius.

(August 3, 1940.) When centranthus is grown at all, it usually is Jupiter's-beard, C. ruber. But even it is not seen so often as its clusters of rose to crimson flowers, on 2-foot stems, throughout the summer, warrant. Although C. angustifolius has long appeared in literature, it is even rarer than C. ruber in gardens. I do not know why that should be, for the plant is easily grown in the border under ordinary care and there puts on a pleasingly long performance, during which it produces a succession of pretty rose-colored flowers on 2-foot stems. It is easy from seeds and permanent. If and when available, I believe neighborhood growers will find it a profitable item.

### Onosma.

(April 7, 1941.) In case you are not now growing any of the onosmas, it is hoped that this note will remind you that you are missing one of summer's choicest offerings when you overlook the genus. Some onosmas bloom in June during the flush of the flowering season, but many delay that happy event until July, when most plants are putting their labors aside, carrying the cycle of color well into the difficult weeks of summer.

There are seventy-five or more species of onosma described in the floras. All that I have grown are good garden plants, and they do not, contrary to the general impression, need rock garden conditions for their comfort. Full sun they do want, and a well drained soil. Many, including O. stellulatum tauricum, the only kind that seems to be at all widely distributed in this country, are at home in a wall, where they get the perfect drainage that they prefer and an opportunity to display their golden drops to best advantage. It would be merely irritating to describe all the good kinds that have found their way into gardens, because few are readily available, but it is safe to say that any kind that comes your way will likely prove to be an addition to your list of summer bloomers. All that I have grown, except some of the Himalayan species, are hardy here. They come readily from seeds and only a little less easily from cuttings.

### Perovskia Atriplicifolia.

(April 7, 1941.) A combination of pretty blue flowers in late summer (August and September here, where it blooms on new growths after its annual killing back to the soil), lovely blue-gray foliage and the ability to get along in quite poor soil, so long as it is well drained and in the sun, should make the central Asian Perovskia atriplicifolia a general favorite. It is surprising, then, to learn that it has made so little headway in this country. The books say it is a shrub growing up to five feet in height, but here, where it acts as an herb, it seldom exceeds eighteen inches. It is a good plant, I should say, for the neighborhood grower. It can be propagated from seeds, when available, or from cuttings of new growths under glass.

### Iberis Saxatilis.

(April 5, 1941.) The rock candytuft seems to be a little understood and seldom seen plant. Bailey says it is an evergreen perennial, six inches or less tall, with linear, entire and somewhat fleshy leaves and corymbs of white flowers. A note written for an amateur magazine some time ago called for an illustration of the plant, and of the entire lot submitted, including some from the most reliable sources in the country, not a one met my idea of what saxatilis should be. From the garden point of view, I. saxatilis, if it is to have value not possessed by common I. sempervirens, must be smaller, much smaller in fact, than that species. And ordinary plants known as I. saxatilis do not meet that requirement.

I have had a plant for years under label of I. saxatilis that does not exceed a height of two inches and may, after several growing seasons, get five or six inches across. Those traits and an extremely early blooming habit (it is so precocious that a few warm days in November induce it to open a few flowers) make it so distinct from all other candytufts that it is instantly recognized by gardeners as something out of the ordinary. Another admirable character, the ability to withstand sun and wind during winter and spring without seared foliage, will be appreciated by gardeners who complain about I. sempervirens in that respect.

With the single exception that it can stand less damp, perhaps because its foliage and stems are so near the ground, it is as easy to grow as any candytuft, and it is hardier than most. If it is to be grown on heavy soil, it should no doubt have an elevated position, as in a crevice in rock garden or wall. It is grown from seeds or cuttings.

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A SMALL office building and other improvements have been completed at the Sunnyside Nursery, 5308 North High street, Worthington, O. Gus Helmer is owner.

# To Cruise Through Georgian Bay

*Cruising through Georgian bay, those on the steamship Seeandbee next July for the convention of the American Association of Nurserymen will see incomparable scenery and historic sites, on their way to see the Soo locks and enjoy a day at Mackinac island, as described in preceding issues.*

Interesting historical and scenic aspects of the Georgian bay region, through which nurserymen will pass on the A. A. N. convention cruise, July 7 to 11, hold no less attention than those of Mackinac island and the "Soo," described in preceding issues.

The geographies tell us that there are in reality upwards of 48,000 islands in the Georgian bay country. It would be difficult to find such another archipelago in this or any other country. A huge arm of Lake Huron, of the Great lakes chain, is dotted with islands, little and big, from a bare dome of rock with but sprouts of verdure in its crevices to a water-bound area covered with dense forests. Westward they extend from the mainland, a distance of fifteen miles or more, and beyond lie the seemingly shoreless waters of the open lake. Within this island realm there is an inner and outer channel, both well protected from rough water and affording routes of exceptional attractiveness.

Here is to be found one of the finest fishing grounds in all Canada, where the angler chooses his lure and location for small-mouth bass, muskies, pickerel and northern pike of a size and weight to thrill the most ardent fisherman. The size and purity of the Georgian bay feeding grounds assure the constant replenishment of the game fish.

The legendary and historic background of the Georgian bay district gives additional glamour to this romantic region, the heart of ancient Huronia, that primitive empire of the Huron Indians. Its story is one of savagery and martyrdom which possibly is unequaled in the annals of early Canadian heroism. It was at Penetanguishene bay, "the place of the white, rolling sands," and an offshoot of the parent Georgian bay, where Champlain landed and entered into his ill-fated covenant to assist the Hurons against the Iroquois, and it was again to Penetanguishene that the Jesuits came to found the first Christian settlement at Fort Sainte Marie, on the Wye river, a short distance from where the progressive and pleasant town of Midland now stands. Fort Sainte Marie prospered, but over Huronia hung the implacable hatred of the Iroquois. Year after year they made incursions into the doomed Indian empire, until at length Fort Sainte Marie was abandoned and the terror-stricken remnant of Hurons were sent flying to a refuge on Christian island, in the Georgian bay. The toll of invasion was terrific; practically all warriors were slaughtered, villages were given over the fire and the gallant "Black Robes," who were in charge of missions, were butchered by tomahawk or burned at the stake. Even at Christian island, the survivors of the proud Hurons were not safe. It was necessary to abandon the second mission fort and seek refuge beneath the walls of Quebec. Three hundred Indians, the remainder of priests and followers of the great mission of Fort Sainte Marie one night crept stealthily away to safety; Huronia was no more. Its empire of forest, water and populous villages was uprooted—a tragic story without equal in the history of aborigine warfare.

But the martyred priests died not in vain. At the town of Penetanguishene, a Jesuit memorial church rises proudly from a lofty site overlooking the bay; near Midland the Martyrs' Shrine, a magnificent church and adjoining buildings, stands by the site of old Fort Sainte Marie. The Jesuit martyrs have been canonized and the Martyrs' Shrine is the scene each year of thousands of pilgrims coming to do them honor. The shrine today is to Ontario what Sainte Anne de Beaupre is to the province of Quebec.

With the settlements of the white man interspersing its waters and forests, the Georgian bay district was destined to be the scene of further strife. In the war of 1812-14 many stirring engagements were fought on its waters between United States and British frigates and sloops.

The antiquarian will be fascinated by the aboriginal legends which cling to the district, of Ahmeek, the beaver, who was given human speech; of the Wendigoes, a giant race which lived in the frozen north; Wahsoona, the beautiful pale flower of morning; Gitche Manito, the Great Spirit, and many other mythological deities that have their being in the quaint folklore of the Hurons. So picturesque, so human are these legends that they but needed the genius of a Longfellow to transmute them into a stirring epic such as "Hiawatha."

The title of "The Blue Water Country," which has been given Georgian bay, is a happy one, for along the south shore of Lake Huron from Sarnia to the Georgian bay ports the bluest of the blue waters lap the shores. Each of its terminal points opens up a widespread playground along the matchless beaches that mark this historic shore.

Wasaga beach, near Stayner, is noted for its beautiful safe bathing beach and has achieved a wide popularity as a summer colony. Its seven miles of sand beach, gradually sloping for some 500 feet from the shore, makes it ideal for bathing, while motorboats, rowboats and canoes are always obtainable for large or small parties. The site of the ill-fated Christian island is now a reservation of the Ojibway tribe. The fishing is excellent; splendid hunting is to be had in the fall, particularly that of birds and small game.

It would be difficult to find a more pleasant 200 miles of coast line with equal attractions for the tourist. Its continuous series of wide, gently sloping beaches, with little rivers and streams flowing leisurely to the larger waters, quiet valleys, green fields and pleasant woodlands combine in their beauty to enthrall visitors.

### PLAN YOUR TRIP NOW.

While many nurserymen may drive to Chicago to embark on the steamer Seeandbee for the convention cruise of the American Association of Nurserymen, July 7 to 11, since they may drive right to the dock and leave the car with a parking attendant there, many others will journey by railroad. It is called to their attention that the eastern lines, such as the New York Central, Pennsylvania and Baltimore & Ohio, have special round-trip rates from various points to Chicago in the summer months. Probably summer special rates prevail from cities in other sections. These low fares will bring the cost down so that, with the low cruise rate, the coming convention will be one of the easiest on visitors' pocketbooks, as well as one of the most enjoyable and unusual.

Different attractions of the cruise, in the way of scenic and historic lore, have been presented in preceding issues, but William J. Smart, transportation chairman, Dundee, Ill., will send anyone a complete outline of the trip, a big illustrated folder in colors, if they will write him. Or use the cruise coupon in the issues of March 15 and April 1.

## PROTEST TEXAS PRISON NURSERY.

The proposal to establish a nursery in the state prison system "for furnishing shrubbery to beautify the grounds around state buildings and for growing Christmas greenery," for which a graduate of Texas A. & M. College, a horticulturist, was recently employed as assistant manager of the Wynne state farm, has brought protest to senators and representatives, as well as the governor, by nurserymen of the state. Harvey Mosty, Kerrville, Tex., secretary of the Texas Association of Nurserymen, has brought the matter to the state-wide attention of the trade.

He recalls that a few years ago the Texas A. & M. College purchased thousands of dollars' worth of plant materials from Texas nurserymen to beautify the grounds, but at present the college is growing its own. The Texas highway department now has several hundred thousand trees and plants growing in its nurseries. Many of the state institutions, however, still buy plant materials from the nurserymen, at prices lower than stock can be produced in state nurseries.

By action of the appropriations committee of the legislature, to restrict the purposes for which funds allotted the system may be used, it is hoped to halt this further encroachment.

## NO HEARING ON TEXAS BILL.

On neither day, April 3 and 10, set for such purpose was a hearing held on the bill to discontinue the Texas department of agriculture and distribute its activities among other state departments and colleges. Several nurserymen went to Austin on the first date to oppose it. J. M. Ramsey, chairman of the legislative committee of the Texas Association of Nurserymen, expressed doubt whether the bill will be called up in committee or, if so, will be reported favorably.

## ARE THEY JEALOUS?

C. D. "Bill" Wagoner, prominent Kansas nurseryman who has figured prominently in Hutchinson's Prairie Powwow, has had his picture widely distributed by the Associated Press. The immediate past president of the Kansas Association of Nurserymen, quite dignified in top hat and Van Dyke beard, is shown by the side of a beauteous blonde in cowgirl regalia, looking none too happy over the whole thing.

Wagoner Takes a Buggy Ride.

"How come?" run the comments. "Is he as indifferent to beauty as he looks, or is he merely uneasy about driving a horse?"

"Just a sissy," say others, "sitting on the girl's left to drive just as though he were in a car!"

"Is there a horse or is he just parked?" is other good-natured kidding, much of it inspired, no doubt, by jealousy.

This powwow is in joint celebration of the seventieth anniversary of Hutchinson, the eightieth of Kansas' statehood and the four hundredth of the entry of the first white man into Kansas, Coronado. In preparation for the doings the men let their whiskers grow.

## SOUTHWESTERN NOTES.

E. M. Garlock, Grand Island, Neb., has been succeeded in business by Leslie McKee and Joseph Pokorney.

The Topeka Daily Capital reports that Lee McKown, nurseryman of Pratt, Kan., believes that more freezes will occur, since his walking-stick cactus, which never starts to show life until all signs of frosts have gone, is still inactive.

Orchardists who have made a tour of orchards in Sedgwick county, Kansas, report that virtually all of the fruit trees were killed in the hard November frost. The loss in trees is expected to be close to 100,000 on the county's 2,000 acres planted to orchards. The peach and apple trees which are now in bloom are not expected to bear fruit. Dr. W. F. Pickett, professor of horticulture at Kansas State College, and W. G. Amstein, extension specialist, who went on the tour, said that the sap which was frozen by the sudden cold burst the cells, thus killing the trees.

## HAYSLER'S RECEPTION.

Ernest Haysler & Son, Kansas City, Mo., held one of the most successful of their many receptions at their Cloverset Flower Farm, Sunday, April 27, when the public was invited to the farm, where it saw an acre of roses, some 30,000 plants in 175 varieties, in the well known types of pots in which the firm specializes.

For the Hayslers that bed of roses was, this year particularly, an achievement. Last November all their roses were lost, including the climbers, by freezing. They at once ordered new stock, received it in February, put it in cold storage and, March 20, commenced to pot it, preparatory for this exhibition.

Twenty-one salesmen and three traffic officers were on hand to handle the crowd of visitors.

# LAST CALL FOR SPRING 1941

We offer the following stock from storage for immediate shipment. All stock guaranteed to be in first-class condition, up-to-grade and true-to-name.
Prices subject to the following quantity discounts:

Orders under $10.00...... 5% $10.00 to $25.00............15% $25.00 to $50.00............20% Over $50.00 ......................25%

on regular June 1 terms, for those with established credit, plus packing at cost, or less additional 5% discount and free packing for cash with order. Wire orders of $50.00 or more by Western Union collect or phone reverse charges on orders of $100.00 or more.

## HARDY DECIDUOUS FLOWERING SHRUBS

| | Per 100 | Per 1000 |
|---|---|---|
| **ALMOND. PRUNUS GLANDULOSA.** Double Pink-flowering, own root. | | |
| 18 to 24 ins., tr., well br. | $17.50 | .... |
| 2 to 3 ft., tr., well br. | 22.50 | .... |
| **ALTHÆA. HIBISCUS SYRIACUS.** Shrub Althea. | | |
| **Ardens,** double violet. | | |
| 12 to 18 ins., c. | $2.50 | .... |
| 18 to 24 ins., c. | 3.00 | .... |
| 12 to 18 ins., tr. | 4.00 | .... |
| **Boule de Feu.** | | |
| 2 to 3 ft., tr. | 8.00 | .... |
| **AMORPHA FRUTICOSA.** False Indigo. | | |
| **AMORPHA TENNESSEENSIS.** Tennessee Indigo. | | |
| 12 to 18 ins., s. | $1.00 | $ 8.00 |
| 18 to 24 ins., s. | 1.25 | 10.00 |
| **BERBERIS THUNBERGII.** Japanese Barberry. | | |
| 6 to 9 ins., s. | $0.70 | $ 6.00 |
| 9 to 12 ins., s. | 1.25 | 10.00 |
| 12 to 15 ins., s. | 2.00 | 15.00 |
| 15 to 18 ins., s. | 3.00 | 25.00 |
| 18 to 24 ins., s. | 4.00 | 35.00 |
| **CARAGANA ARBORESCENS.** Siberian Pea Tree. | | |
| 18 to 24 ins., s. | $1.50 | $12.00 |
| **CORNUS SANGUINEA.** Blood Twig Dogwood. | | |
| 6 to 12 ins., c. | $1.25 | $10.00 |
| 12 to 18 ins., c. | 1.50 | 12.00 |
| 18 to 24 ins., c. | 2.00 | 15.00 |
| **CORNUS STOLONIFERA.** Red Osier Dogwood. | | |
| 12 to 18 ins., s. | $1.25 | $10.00 |
| 18 to 24 ins., s. | 1.50 | 12.00 |
| **DEUTZIA SCABRA.** | | |
| **Candidissima Flore-pleno,** double white. | | |
| **Crenata,** double pink. | | |
| **Pride of Rochester,** double rose. | | |
| 6 to 12 ins., c. | $1.25 | $10.00 |
| 12 to 18 ins., c. | 1.50 | 12.00 |
| 12 to 18 ins., well br. | 3.50 | 30.00 |
| 18 to 24 ins., well br. | 4.00 | 35.00 |
| 2 to 3 ft., well br. | 6.00 | 50.00 |
| **ELÆAGNUS ANGUSTIFOLIA.** Russian Olive. | | |
| 18 to 24 ins., s. | $2.00 | $15.00 |
| **EXOCHORDA GRANDIFLORA.** Pearlbush. | | |
| 6 to 12 ins., s. | $2.00 | $15.00 |
| **HYDRANGEA ARBORESCENS.** Native Hydrangea. | | |
| 12 to 18 ins., 1-yr. | $1.25 | $12.00 |
| 18 to 24 ins., 1-yr. | 2.00 | 15.00 |
| **LIGUSTRUM AMURENSE.** Amoor North Privet. | | |
| 6 to 15 ins., l.o. | $0.70 | $ 6.00 |
| 6 to 12 ins., 2 br. up | .80 | 7.00 |
| 9 to 12 ins., 3 br. up | 1.00 | 9.00 |
| **LIGUSTRUM OBTUSIFOLIUM.** Ibota Privet. | | |
| 6 to 12 ins., 2 br. up | $0.80 | $ 6.00 |
| 12 to 18 ins., 2 br. | 1.00 | 9.00 |
| 12 to 18 ins., 3 br. up | 1.50 | 12.00 |
| 18 to 24 ins., 3 br. up | 2.00 | 15.00 |
| 2 to 3 ft., 3 br. up | 3.00 | 25.00 |
| 3 to 4 ft., 4 br. up | 4.00 | 35.00 |
| **LIGUSTRUM OVALIFOLIUM.** California Privet. | | |
| 6 to 15 ins., l.o. | $0.70 | $ 6.00 |
| 6 to 12 ins., 2 br. up | .80 | 7.00 |
| 12 to 18 ins., 3 br. up | 1.50 | 12.00 |
| **LIGUSTRUM SINENSE.** South Privet. | | |
| 12 to 18 ins., tr., well br. | $1.25 | $10.00 |
| 18 to 24 ins., tr., well br. | 2.00 | 15.00 |
| 2 to 3 ft., tr., well br. | 2.50 | 20.00 |
| **LONICERA FRAGRANTISSIMA.** Winter Honeysuckle. | | |
| 12 to 18 ins., c. | $2.00 | $15.00 |
| 18 to 24 ins., c. | 2.50 | 20.00 |
| 18 to 24 ins., 2-yr., 3 br. up | 4.50 | 40.00 |
| 2 to 3 ft., 2-yr., 4 br. up | 8.00 | 70.00 |
| **LONICERA MORROWI.** Morrow's Honeysuckle. | | |
| 6 to 12 ins., c. | $2.00 | $15.00 |
| 12 to 18 ins., c. | 2.50 | 20.00 |
| 18 to 24 ins., c. | 3.00 | 25.00 |
| 12 to 18 ins., hedging | 4.00 | 35.00 |
| 18 to 24 ins., hedging | 5.00 | 45.00 |
| 18 to 24 ins., tr. | 7.00 | .... |
| 2 to 3 ft., tr. | 10.00 | .... |
| **LONICERA TATARICA ALBA.** White Tatarian Honeysuckle. | | |
| 6 to 12 ins., c. | $2.00 | $15.00 |
| 12 to 18 ins., c. | 2.50 | 20.00 |
| 18 to 24 ins., c. | 3.00 | 25.00 |
| 12 to 18 ins., hedging | 4.00 | 35.00 |
| 18 to 24 ins., hedging | 5.00 | 45.00 |
| **PHILADELPHUS.** Mock Orange. | | |
| **Coronarius.** | | |
| **Grandiflorus.** | | |
| **Nivalis.** | | |
| 12 to 18 ins., c. | $2.50 | $20.00 |
| 18 to 24 ins., c. | 3.00 | 25.00 |
| 18 to 24 ins., 2-yr. | 6.00 | .... |
| 2 to 3 ft., 2-yr. | 8.00 | .... |
| **RHUS CANADENSIS** (Aromatica). Fragrant Sumac. | | |
| 12 to 18 ins., s. | $2.00 | .... |
| 18 to 24 ins., s. | 2.50 | .... |
| **RHUS.** Sumac. | | |
| **Glabra,** smooth sumac. | | |
| **Typhina,** staghorn sumac. | | |
| 3 to 4 ft., s. | $2.50 | .... |
| 4 to 5 ft., s., whips | 3.50 | .... |
| **SPIRÆA ARGUTA.** Garland Spiræa. | | |
| 6 to 12 ins., c. | $3.00 | $25.00 |
| 12 to 18 ins., c. | 3.50 | 30.00 |
| 12 to 18 ins., 2-yr., tr. | 6.00 | 55.00 |
| 18 to 24 ins., 2-yr., tr. | 8.00 | .... |
| 2 to 3 ft., 2-yr., tr. | 10.00 | .... |
| 3 to 4 ft., 2-yr., tr. | 12.00 | .... |
| **SPIRÆA REEVESIANA.** Reeves Spiræa. (Single white bloom.) | | |
| 12 to 18 ins., c. | $1.50 | .... |
| 18 to 24 ins., c. | 2.00 | .... |
| **SPIRÆA THUNBERGII.** Thunberg's Spiræa. | | |
| 6 to 12 ins., c. | $3.00 | .... |
| 12 to 18 ins., c. | 3.50 | .... |
| 12 to 18 ins., tr. | 7.00 | .... |
| 18 to 24 ins., tr. | 9.00 | .... |
| **SPIRÆA VANHOUTTEI.** | | |
| 6 to 12 ins., c. | $1.25 | $10.00 |
| 12 to 18 ins., c. | 1.50 | 12.00 |
| 18 to 24 ins., c. | 2.00 | 15.00 |
| 12 to 18 ins., hedging | 2.50 | 20.00 |
| 18 to 24 ins., hedging | 3.00 | 25.00 |
| 2 to 3 ft., hedging | 4.00 | 35.00 |
| **SYMPHORICARPOS VULGARIS.** Coralberry. | | |
| 12 to 18 ins., 1-yr., c. | $0.80 | $ 7.00 |
| 18 to 24 ins., 1-yr., c. | 1.25 | 10.00 |
| 18 to 24 ins., tr. | 3.50 | 30.00 |
| 2 to 3 ft., tr. | 5.00 | 40.00 |
| **WEIGELA.** | | |
| **Amabilis,** light pink. | | |
| **Hendersonii,** dark pink. | | |
| 6 to 12 ins., c. | $1.50 | $12.50 |
| 12 to 18 ins., c. | 2.00 | 15.00 |
| 18 to 24 ins., c. | 2.50 | 20.00 |
| 12 to 18 ins., tr., br. | 3.50 | 30.00 |
| 18 to 24 ins., tr., br. | 5.00 | 45.00 |
| 2 to 3 ft., tr., br. | 9.00 | 80.00 |
| **WEIGELA.** | | |
| **Rosea,** pink. | | |
| 6 to 12 ins., c. | $1.50 | $12.50 |
| 12 to 18 ins., c. | 2.00 | 15.00 |
| 18 to 24 ins., c. | 2.50 | 20.00 |
| 12 to 18 ins., tr., br. | 3.50 | 30.00 |
| 18 to 24 ins., tr., br. | 5.00 | 45.00 |
| 2 to 3 ft., tr., br. | 9.00 | 80.00 |
| 3 to 4 ft., tr., br. | 12.00 | .... |
| **WEIGELA VARIEGATED.** Pink flower, variegated leaf. | | |
| 6 to 12 ins., c. | $2.00 | $15.00 |
| 12 to 18 ins., c. | 2.50 | 20.00 |
| 18 to 24 ins., c. | 3.00 | 25.00 |

## VINES AND CREEPERS

| | | |
|---|---|---|
| **CELASTRUS ORBICULATUS.** Oriental Bittersweet. | | |
| **CELASTRUS SCANDENS.** American Bittersweet. | | |
| 6 to 12 ins., s. | $1.25 | $10.00 |
| 12 to 18 ins., s. | 1.50 | 12.00 |
| 18 to 24 ins., s. | 2.00 | 15.00 |
| **LONICERA JAPONICA HALLIANA.** Hall's Japanese Honeysuckle. | | |
| 2-yr., tr., No. 1 | $4.00 | $30.00 |
| 2-yr., tr., No. 2 | 3.00 | 25.00 |
| 2-yr., tr., No. 3 | 2.00 | 15.00 |
| 3-yr., tr., No. 1 | 5.00 | 40.00 |
| 3-yr., tr., No. 2 | 4.50 | 35.00 |

## FOREST AND SHADE TREES

| | Per 100 | Per 1000 |
|---|---|---|
| **ACER RUBRUM.** Red or Scarlet Maple. | | |
| 6 to 12 ins., s. | $0.80 | $ 6.00 |
| 12 to 18 ins., s. | 1.25 | 10.00 |
| 18 to 24 ins., s. | 1.50 | 12.00 |
| **ALBIZZIA JULIBRISSIN.** Mimosa Tree. | | |
| 12 to 18 ins., s. | $4.00 | $35.00 |
| 18 to 24 ins., s. | 5.00 | 45.00 |
| 2 to 3 ft., s. | 8.00 | .... |
| **BETULA LENTA.** Sweet Birch. | | |
| 12 to 18 ins., s. | $1.25 | .... |
| 18 to 24 ins., s. | 1.50 | .... |
| **CARPINUS CAROLINIANA.** American Hornbeam. | | |
| 12 to 18 ins., s. | $1.50 | $12.00 |
| 18 to 24 ins., s. | 2.00 | 15.00 |
| **CATALPA BIGNONIOIDES.** Common C. | | |
| **CATALPA SPECIOSA.** Western Catalpa. | | |
| 12 to 18 ins., s. | $0.60 | $ 5.00 |
| 18 to 24 ins., s. | .70 | 6.00 |
| 2 to 3 ft., s. | 1.00 | 8.00 |
| **GLEDITSIA TRIACANTHOS.** Honey Locust. | | |
| 6 to 12 ins., s. | $0.50 | $ 4.00 |
| 12 to 18 ins., s. | .70 | .... |
| **JUGLANS CINEREA.** Butternut. | | |
| **JUGLANS NIGRA.** Black Walnut. | | |
| 12 to 18 ins., s. | $1.50 | .... |
| 18 to 24 ins., s. | 2.00 | .... |
| 2 to 3 ft., s. | 2.50 | .... |
| 3 to 4 ft., s. | 3.50 | .... |
| **LIQUIDAMBAR STYRACIFLUA.** Sweet Gum. | | |
| 6 to 12 ins., s. | $1.00 | .... |
| 12 to 18 ins., s. | 1.25 | .... |
| 18 to 24 ins., s. | 2.25 | .... |
| **LIRIODENDRON TULIPIFERA.** Tulip Tree. | | |
| 4 to 6 ins., s. | $0.45 | $ 3.50 |
| 6 to 12 ins., s. | .60 | 5.00 |
| 12 to 18 ins., s. | .80 | 7.00 |
| 18 to 24 ins., s. | 1.25 | 10.00 |
| 2 to 3 ft., s. | 1.50 | 12.00 |
| 3 to 4 ft., s. | 2.50 | 20.00 |
| **MALUS CORONARIA.** Wild Sweet Crab. | | |
| 6 to 12 ins., s. | $5.00 | .... |
| 12 to 18 ins., s. | 6.00 | .... |
| 18 to 24 ins., s. | 8.00 | .... |
| **MORUS ALBA TATARICA.** Russian Mulberry. | | |
| 6 to 12 ins., s. | $0.50 | $ 4.00 |
| 18 to 24 ins., s. | 1.00 | 8.00 |
| **POPULUS NIGRA ITALICA.** Lombardy Poplar. | | |
| 12 to 18 ins., c. | $1.25 | $10.00 |
| 18 to 24 ins., c. | 1.50 | 12.00 |
| 2 to 3 ft., c. | 2.25 | 17.50 |
| 3 to 4 ft., c. | 3.00 | 25.00 |
| **PRUNUS AMERICANA.** American Plum. | | |
| 12 to 18 ins., s., No. 2 | $1.00 | .... |
| 18 to 24 ins., s., No. 1 | 1.25 | $10.00 |
| **ROBINIA PSEUDOACACIA.** Black Locust. | | |
| 4 to 6 ins., s. | $0.30 | $ 2.00 |
| 6 to 12 ins., s. | .40 | 3.00 |
| 12 to 18 ins., s. | .60 | 5.00 |
| 18 to 24 ins., s. | .70 | 6.00 |
| 2 to 3 ft., s. | 1.25 | 9.00 |
| **ULMUS AMERICANA.** American Elm. | | |
| 6 to 12 ins., s. | $0.40 | $ 3.00 |
| 12 to 18 ins., s. | .60 | 4.50 |
| 2 to 3 ft., s. | 1.25 | 10.00 |
| 3 to 4 ft., s. | 1.50 | 12.00 |
| 4 to 5 ft., tr. | 15.00 | .... |
| **ULMUS PUMILA.** Chinese Elm. | | |
| 6 to 12 ins., s. | $0.40 | $ 3.00 |
| 12 to 18 ins., s. | .60 | 5.00 |
| 18 to 24 ins., s. | 1.25 | 10.00 |

## MISCELLANEOUS

| | | |
|---|---|---|
| **ASPARAGUS,** Conover, Palmetto and Washington. | | |
| 2-yr., s., No. 1 | $0.70 | $6.00 |
| 2-yr., s., No. 2 | .60 | 5.00 |
| **RHUBARB** Linneaus and Victoria. | | |
| ¾ to 1-in. | $2.00 | $15.00 |
| ½ to ¾-in. | 1.50 | 12.00 |
| Under ½-in. | 1.25 | 10.00 |

## HARDWOOD CUTTINGS

**LIGUSTRUM AMURENSE.**
**LIGUSTRUM IBOLIUM.** Ibolium Privet.
**LIGUSTRUM OBTUSIFOLIUM.**
**LIGUSTRUM OVALIFOLIUM.**

| | |
|---|---|
| No. 1 | $1.50 per 1000 |
| No. 2 | 1.25 per 1000 |

**Established 1887**
**By J. H. H. Boyd**
**Wholesale Only**

# FOREST NURSERY COMPANY, INC.

**McMINNVILLE, TENNESSEE**

**J. R. Boyd**
**President**
**Nothing sold at retail**

# Charlie Chestnut

## The Pink Crabapple

It was early in the spring of 1922 when we had the train wreck in Riverbend. Probably some of the members who have been in our office have wondered how it comes that the inside wall of the office is lined with every kind of glazed building tile a person ever saw, all colors. There was a sample shipment of tile in one of the freight cars in that wreck, and it was strewn all over the right of way, and a lot of it broke. Emil bought the lot for $3.00, and we carried it home and piled it up in the corn crib. Emil didnt have no idea what to do with it, but when he come to build the office, Emil wanted to work the tile in someplace, but there wasnt enough of any one kind, so we mixed it all up and made a wains coating up about three feet all around the office.

Then there was the damages Emil collected which helped him to keep the nursery going when he was about ready to fold up. The members have heard me tell about that 5 acres along the railroad. Right there was where 6 freight cars jumped the track and rolled down the bank and over into the nursery. At that time we had a big block of 5 inches and up of odds and ends of shade trees we hadnt had time to grub out. After the wrecking crew had got thru, and what with the rest of the people milling around, the whole block was pretty well ruined. Emil asked damages of $5000, but settled with the Ry. Co. for $1200. Thats the one thing that accounts for the fact he is still in business, as he was up against it worse than usual just at that time.

But that wasnt the only thing that come out of that train wreck. The wreck was about 6 oclock in the A.M. on a rainy morning in early March. We was over there most all day gethering up tile and arguing with the adjustor about the trees, so we didnt get back to the barn to feed the horse until late in the afternoon. Thats when we found Dopey Dan. We didnt know then he was Dopey Dan. In fact, Emil didnt know until I let him read this story. Dan was laying there on a pile of hay with his ankle all swelled up, and he was a pretty sick looking bird.

Dan was a knight of the road. He had been taking a ride in one of the box cars that rolled over the bank. He was shook up a good deal, and sprained his ankle, but he had managed to crawl over to the barn just where we found him. Dan might have been anywhere between 40 and 60. If he had a shave and a hair cut, he might have passed for a fairly young man. All he had with him was his blanket roll, and the clothes on his back.

"I aint in no shape to travel right now," Dan said. "If you will let me spread my blanket here in the barn until I get able to work, I will work out my board and keep. Im a handy man at anything. In fact, I put in most of last winter on the Florida east coast working in a nursery."

"Cant have no strangers around here in the barn all spring, and besides you might steal me blind. One time a tramp stayed here, and when he left one of my best horse collars was missing," says Emil.

"Wait a minute, Emil," I says. "You found that horse collar in the greenhouse where you took it yourself to sew it up and forgot it. That wasnt no tramp took that," I says.

"I aint no tramp," says Dan. "Im a wood carver and a painter, and general all around handy man. In fact, I can draw you as pretty a picture of a landscape you ever seen."

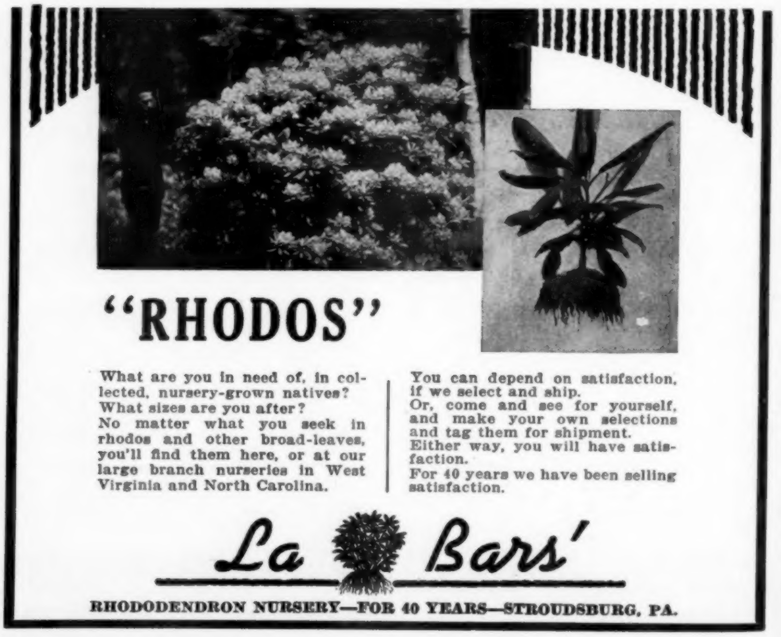
"Can you draw landscape plans if I show you what to put in it?" Emil asked.

"Tell you what you do mister," Dan says, "you help me to bind up this ankle and get me a little grub, and I will draw you some pictures that will sell all the shrubbery you got."

"Well, I'll see what you can do. I aint promising, but I'll see first," says Emil.

We got Dan fixed up and then I moved him over to the greenhouse in the wheelbarrow and set him down beside the boiler where we had a cot. We brought him over some paper and pencils and he went to work. The pictures he turned out made Emils old rough wrapping paper plans look sick. Dan was really an artist. He took one of Emils plans and worked it over into something that was good enough to hang on the wall. At first he took to drawing in Royal Palms and southern stuff, but when he got the hang of it, there wasnt no plans turned out anyplace that had him beat.

Emil used to go down in the boiler room to watch Dan work and Dan would tell him about the different places all over the country where he



"RHODOS"

What are you in need of, in collected, nursery-grown natives? What sizes are you after? No matter what you seek in rhodos and other broad-leaves, you'll find them here, or at our large branch nurseries in West Virginia and North Carolina.

You can depend on satisfaction, if we select and ship. Or, come and see for yourself, and make your own selections and tag them for shipment. Either way, you will have satisfaction. For 40 years we have been selling satisfaction.

La Bars'

RHODODENDRON NURSERY—FOR 40 YEARS—STROUDSBURG, PA.

had worked in his time. Evenings he took to carving stuff. He made Emils Mrs. a fancy box for her knives and forks. It was all carved with fish and animals, and the handle was an alligator just as true to life as you ever seen.

When he got so he could hobble around he took to fixing up things around the place that was busted. The lock on the office hadnt worked for years, so Dan took it apart and then he made a key to fit it.

"Never seen such a man to fix up stuff," Emil said. "But I don't like it how handy he is with locks. He is liable to take a notion to monkey with the safe in the office. Better keep an eye on him, Chas."

Even after he was able to work he never left the place. Used to have me bring up tobacco from town and I even had to bring him a pair of shoes. "Looks kind of funny, Dan dont ever leave the place, Chas.," Emil says.

One day the state motorcycle cop drove in. He didnt want nothing but a few free bushes which we have always got to put out to those boys just to be on the safe side. But all the time he was there, Dan never showed his face. He hung right in the horse barn and didnt come out until the cop left.

Emil noticed it too. "You cant tell me that Dan aint some kind of a hideout from the law, Chas. He never leaves the place, and just now he dove into the barn like somebody was chasing him. Better keep a eye on him, Chas.," says Emil.

One morning along in June when the work was pretty well all over, I was expecting Emil to put the skids on Dan, as Emil never figured to keep anybody during the summer, and sure enough, he told me to go over to the greenhouse and get Dan. "Tell Dan to come over to the office," he says. So I went over to where Dan had his bed and told him the boss wanted to see him. Always before I had never seen Dan's bed except when he had his blanket all rolled up and tied with a rope. This morning he didnt wait to tie up his blanket, but put on his pants and shoes and went right over to the office.

Thats how I come to notice a little canvas bag which Dan had there sticking out from under his pillow. I looked out the window to

# SPRING SEASON SPECIALS

**CHOICE TREES, SHRUBS AND VINES OFFERED FOR SPRING SHIPMENT AT LAST YEAR'S SURPLUS PRICES.**

## NOW IS THE TIME TO ORDER

**Prices quoted are for lots of 25 or more—for lesser quantities add 25%. No orders accepted for less than 5 of a size or variety.**

### TREES

| | Price per 100 |
|---|---|
| **ACER** dasycarpum, 1 to 1½-in. | $50.00 |
| dasycarpum, 1½ to 2-in. | 75.00 |
| Skinneri, 2 to 2½-in. | 100.00 |
| saccharum, 2 to 2½-in. | 225.00 |
| saccharum, 2½ to 3-in. | 275.00 |
| **ÆSCULUS** Hippocastanum, 1 to 1½-in. | 150.00 |
| **BETULA** populifolia, 8 to 10 ft. | 200.00 |
| **CELTIS** occidentalis, 1½ to 2-in. | 150.00 |
| **CRATÆGUS** coccinea, 2 to 3 ft. | 35.00 |
| coccinea, 3 to 4 ft. | 50.00 |
| Crus-galli, 2 to 3 ft. | 65.00 |
| mollis, 5 to 6 ft. | 75.00 |
| mollis, 6 to 8 ft. | 100.00 |
| **FRAXINUS** lanceolata, 1 to 1½-in. | 60.00 |
| **GYMNOCLADUS** dioica, 6 to 8 ft. | 100.00 |
| **MALUS** Hopa, 5 to 6 ft. | 65.00 |
| Niedzwetzkyana, 5 to 6 ft. | 65.00 |
| Parkmanii, 5 to 6 ft. | 65.00 |
| Zumi, 6 to 7 ft. | 100.00 |
| **OSTRYA** virginiana, 8 to 10 ft. | 75.00 |
| **PRUNUS** americana, 4 to 5 ft. | 8.00 |
| americana, 5 to 6 ft. | 10.00 |
| americana, 7 to 8 ft. | 15.00 |
| **SYRINGA** japonica, 5 to 6 ft. | 40.00 |
| japonica, 10 to 12 ft. | 200.00 |
| **ULMUS** americana, 5 to 6 ft. | 25.00 |
| americana, 6 to 8 ft. | 30.00 |
| americana, 1½ to 2-in. | 50.00 |
| klehmi, 1½ to 2-in. | 50.00 |

### SHRUBS

| | |
|---|---|
| **ACANTHOPANAX** pentaphyllum, 3 to 4 ft. | $15.00 |
| **ARONIA** brilliantissima, 3 to 4 ft. | 30.00 |
| melanocarpa (nigra), 2 to 3 ft. | 25.00 |
| **BERBERIS** Thunbergii, 18 to 24 ins. | 10.00 |
| Thunbergii, 2 to 2½ ft. | 17.50 |
| atropurpurea, 15 to 18 ins. | 20.00 |
| atropurpurea, 18 to 24 ins. | 25.00 |
| **CEPHALANTHUS** occidentalis, 3 to 4 ft. | 20.00 |
| **CORNUS** Amomum (sericea), 4 to 5 ft. | 20.00 |
| paniculata, 3 to 4 ft. | 17.50 |
| stolonifera, 4 to 5 ft. | 20.00 |
| **CORYLUS** americana, 3 to 4 ft. | 17.50 |
| **CYDONIA** japonica, 18 to 24 ins. | 10.00 |
| **EUONYMUS** americanus, 4 to 5 ft. | 20.00 |
| atropurpureus, 4 to 5 ft. | 25.00 |
| **FORSYTHIA** intermedia, 4 to 5 ft. | 15.00 |
| suspensa, 3 to 4 ft. | 12.50 |
| **HYDRANGEA** arborescens grandiflora, 2½ to 3 ft. | 20.00 |
| **LIGUSTRUM** amurense, 3 to 4 ft. | 7.00 |
| amurense, 4 to 5 ft. | 10.00 |
| Ibolium, 2 to 3 ft. | 8.00 |
| Ibota, 2 to 3 ft. | 6.00 |
| regelianum, 18 to 24 ins. | 20.00 |
| regelianum, 2 to 3 ft. | 25.00 |
| vulgaris, 4 to 5 ft. | 10.00 |
| **LONICERA** fragrantissima, 4 to 5 ft. | 20.00 |
| Morrowi, 4 to 5 ft. | 12.50 |
| tatarica rosea, 4 to 5 ft. | 12.50 |
| Zabelii, 3 to 4 ft. | 22.50 |
| **MAHONIA** Aquifolium, B&B, 15 to 18 ins. | 75.00 |

### SHRUBS (*Continued*)

| | Price per 100 |
|---|---|
| **PHILADELPHUS** coronarius, 5 to 6 ft. | $17.50 |
| Lemoinei Avalanche, 3 to 4 ft. | 17.50 |
| Lemoinei Bouquet Blanc, 2 to 3 ft. | 15.00 |
| **PHOTINIA** villosa, 4 to 5 ft. | 35.00 |
| **PHYSOCARPUS** monogynus, 18 to 24 ins. | 12.50 |
| opulifolius, 3 to 4 ft. | 10.00 |
| **PTELEA** trifoliata, 4 to 5 ft. | 20.00 |
| trifoliata, 6 to 8 ft. | 25.00 |
| **RHAMNUS** cathartica, 4 to 5 ft. | 12.50 |
| cathartica, 5 to 6 ft. | 15.00 |
| Frangula, 4 to 5 ft. | 12.50 |
| Frangula, 5 to 6 ft. | 15.00 |
| **RHUS** canadensis (aromatica), 18 to 24 ins. | 15.00 |
| canadensis (aromatica), 2 to 3 ft. | 25.00 |
| **RIBES** alpinum, 15 to 18 ins. | 22.50 |
| alpinum, 18 to 24 ins. | 27.50 |
| **ROSA** blanda, 3 to 4 ft. | 10.00 |
| lucida (virginiana), 3 to 4 ft. | 10.00 |
| palustris (carolina), 3 to 4 ft. | 12.50 |
| setigera, 2 to 3 ft. | 10.00 |
| **SAMBUCUS** canadensis, 4 to 5 ft. | 20.00 |
| **SORBARIA** sorbifolia, 4 to 5 ft. | 20.00 |
| **SPIRÆA** Bumalda Frœbeli, 2 to 3 ft. | 12.50 |
| latifolia (bethlehemensis), 3 to 4 ft. | 15.00 |
| Thunbergii, 2 to 3 ft. | 17.50 |
| Vanhouttei, 3 to 4 ft. | 12.50 |
| **SYMPHORICARPOS** racemosus, 2 to 3 ft. | 10.00 |
| racemosus, 3 to 4 ft. | 12.50 |
| vulgaris, 3 to 4 ft. | 12.50 |
| **SYRINGA** persica, 2 to 3 ft. | 20.00 |
| vulgaris alba, 3 to 4 ft. | 12.50 |
| hybrid Charles X, 4 to 5 ft. | 75.00 |
| hybrid Charles X, 5 to 6 ft. | 100.00 |
| hybrid Waldeck-Rosseau, 2 to 3 ft. | 35.00 |
| hybrid Waldeck-Rosseau, 3 to 4 ft. | 50.00 |
| **VIBURNUM** affine hypomalacum (pubescens), 3 to 4 ft. | 25.00 |
| americanum (pembina), 2 to 3 ft. | 22.50 |
| dentatum, 2 to 3 ft. | 20.00 |
| dentatum, 3 to 4 ft. | 25.00 |
| Lantana, 3 to 4 ft. | 20.00 |
| Lantana, 4 to 5 ft. | 22.50 |
| Lentago, 3 to 4 ft. | 25.00 |
| Lentago, 4 to 5 ft. | 30.00 |
| molle (venosum), 3 to 4 ft. | 25.00 |
| Opulus, 2 to 3 ft. | 20.00 |
| Opulus, 4 to 5 ft. | 30.00 |
| **WEIGELA** rosea, 3 to 4 ft. | 15.00 |
| rosea, 4 to 5 ft. | 17.50 |

### VINES

| | |
|---|---|
| **AMPELOPSIS** quinquefolia, 2-yr. | $ 7.00 |
| **ARISTOLOCHIA** Sipho, 3-yr. | 25.00 |
| **CELASTRUS** orbiculatus (articulatus), 2-yr. | 8.00 |
| orbiculatus (articulatus), 3-yr. | 10.00 |
| scandens, 2-yr. | 8.00 |
| scandens, 3-yr. | 10.00 |

### GRAPES

| | |
|---|---|
| Campbell Early, 3-yr. | $ 5.00 |
| Concord, 3-yr. | 5.00 |
| Moore Diamond, 3-yr. | 5.00 |
| Moore Early, 3-yr. | 5.00 |
| Niagara, 3-yr. | 5.00 |
| Worden, 3-yr. | 5.00 |

**All stock offered and prices quoted for Spring 1941 shipment only. Orders accepted subject to prior sales and our usual terms and conditions of sale and shipment. Packing charges extra at cost. No charge for packing carlot orders in bulk. Cash with order or satisfactory references. If interested in larger quantities write for prices.**

**NAPERVILLE NURSERIES, INC.**
**NAPERVILLE DU PAGE COUNTY ILLINOIS**

see that Dan was already in the office with Emil, and then I opened the bag to see if I could get any light on the mystery about Dan. There was a note book with a few loose papers and a newspaper clipping. It was pretty well worn, but I could make out the most of it. "Dopey Dan Released Today" was the heading. "For the past 6 months, the Clark County Jail has had the person of one Dopey Dan under its custody. Dan has proven to be a model prisoner. During his stay here, he has not only completely painted the jail house, but painted several landscape pictures, which the marshal has given to several of his friends. Dopey Dan was taken into custody last July during the stay of the Arizona Days Carnival Company. Dan was found to have a failing for exploring other peoples pockets, and the law caught up to him right in the act, when he tried to pick the pockets of Marshal Cassidy. Dan was escorted this morning to the depot by the marshal and your reporter, and safely installed in a side door pullman heading west."

So thats it. Thats why Dan is a little shy of the law. If Emil knew that he would not sleep until Dan was far removed from Riverbend. I put back the papers and went on over to the office. Dan was in there with Emil.

"Well, Chas.," Emil says, "me and Dan has come to a little arrangement. Dan is willing to work for his board for the summer, only he wants off during July. He has got to go and see his sister in Michigan."

I says to myself, thats when most of the carnivals are going on in all the towns around here. Theres one over in Lake Park every July, and probably thats where Dan will head for. So in a couple of days, sure enough, Dan light out just about the time the carnival was due there. I went over to the carnival on Saturday night. Dan was there alright, working his way where the crowd was thickest. I edged over to where I could speak to him. I sneaked up behind him and whispered in his ear.

"Careful, Dopey," I says, "the cops have got you spotted. Better come home with me before you get in trouble."

First thing he says, "Chas., does Emil know about me too?"

"Not so far as I know," I says, "I just doped it out there was something wrong, and I guessed it right. Why dont you come back while you are still outside the clutches of the law. You can tell Emil you heard your sister moved away, and Ill swear Ill never mention it to a soul." I had come to like old Dan, and I hated to see him get into trouble.

"Chas.," he says, "I aint never had a real steady place before and a real home until Emil took me in. I will go back and settle down for good. I promise I wont never try my hand at it again. My fingers is getting too clumsy anyway."

I think he meant it too by the way he sounded, so I says, "O.K. Dan, come on back and I will never mention it again."

Dan come on home with me and went back to work. He was with Emil thru thick and thin for 12 years, and he was the best man we ever had.

All them years when Jake and some of our other competitors used to marvel at them wonderful fancy landscape plans we turned out, Emil used to say it was me that drew them, but it wasnt me, I will give old Dan credit. He took pride in making those pictures.

Along toward the end, he got attacks where he would be laid up for a couple of days, but me and Emil never thought anything real serious was the matter. One morning I found him dead in bed. He must have known the end was near, because he had written a letter. There wasnt no date on it, but it was there in the bag under his pillow. All the other stuff including the clipping, he had destroyed years before. There wasnt much to the letter, as I remember. There was only a couple of paragraphs. "Dear Emil," it begun. "If I have enough left when I die, please get me a plain box and bury me out there at the far end of the nursery. Theres a gully there where you wont be using the land. I got the place marked with a pile of rocks. And only one thing more, Emil, if you can spare one of them crab apples, plant one of them. A pink one. Dan."

Late last spring one evening in the early dusk, I seen Emil back there by that crabapple. He had it all trimmed up and the grass cut. He was just standing there leaning on his sythe. Afterwhile when he come back to the barn he says to me, "Chas., did you ever notice that pink crabapple out there at the end of the nursery where Dan is, its different than the rest. Its got a little spot of red in the center of the flower, where all the others are white. Thats going to be a new variety, Chas. Im going to call it the Dapper Dan Crabapple."

Poor old Emil couldnt look me in the eye as he said it. "Dapper Dan Crab" he mumbled to himself as he walked away. I guess the old boy has got more sentiment in him than I thought.

---

THE buildings at the nursery of Bradley Bros., Carbondale, Ill., were burned to the ground April 14. The residence and gardens, except those adjacent to the office and stock building, were undamaged.

HARDY PHLOX STRONG FIELD-GROWN NO. 1 PLANTS

6 of a kind at doz. rate.
25 of a kind at 100 rate.

WHITE AND BLUSH-WHITE SHADES

| | Doz. | 100 |
|---|---|---|
| **Bridesmaid.** White, crimson eye | $1.00 | $6.00 |
| **Frau Anton Buchner.** Pure white | 1.00 | 6.00 |
| **Mrs. Jenkins.** Best early white.. | 1.00 | 6.00 |

SALMON AND PINK SHADES

| | Doz. | 100 |
|---|---|---|
| **Geo. Stipp.** Deep glowing salmon | 1.20 | 8.00 |
| **Lillian.** Choice salmon-pink... | 1.80 | 12.00 |
| **Morgenrood.** Rose shade, deeper eye .......................... | 1.20 | 8.00 |
| **Special French.** Blush-pink salmon eye .................. | 1.00 | 7.00 |
| **Sweetheart.** (New.) Beautiful deep salmon-pink ........... | 3.00 | 20.00 |

RED AND SCARLET SHADES

| | Doz. | 100 |
|---|---|---|
| **Eclaireur.** Brilliant rosy magenta .................... | 1.00 | 6.00 |
| **Electra.** Rich satiny purplish-red .......................... | 1.00 | 7.00 |
| **Imperator.** Carmine, darker eye | 1.00 | 7.00 |
| **Juliglut** (Julyglow). (New.) vivid purple-red ............ | 4.50 | 30.00 |

LAVENDER AND MAUVE SHADES

| | Doz. | 100 |
|---|---|---|
| **La Vague.** Mauve with carmine eye ............................ | $1.00 | $6.00 |
| **Lavender Beauty.** Deep lavender | 1.00 | 7.00 |
| **Mrs. Chas. Door.** Clear lavender .......................... | 1.00 | 7.00 |

PURPLE AND VIOLET SHADES

| | Doz. | 100 |
|---|---|---|
| **Aida.** (New.) Deep rich purple, striking ...................... | 3.00 | 20.00 |
| **San Antonio.** (New.) Most vivid and brilliant color of carmine shaded plum-red. Good clean grower. Does not fade ...... | 2.50 | 18.00 |

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| | Doz. | 100 |
|---|---|---|
| Per 1000, **$45.00**................ | .75 | 5.00 |

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HOW MANY TIMES HAVE YOU SAID:—

"I wish people would call for Oriental Poppies in the fall (when you can plant them) instead of in the late Spring (when they are in bloom and you can't plant them)"?

Isn't it true...but this year YOU CAN CASH IN ON THEIR REQUESTS

Last fall we potted a bunch of Orientals in 6-inch Cloverset pots to meet this demand, and they are ready for shipment now. This stock will bloom right in these pots and if you don't sell them before—you sure can sell them in bloom.

We also have a fair supply of dormant roots in the same varieties at **$0.08 less per root** than the potted plants.

HOW ABOUT GETTING YOUR ORDER IN WHILE THE SUPPLY LASTS?

| | | Per 10 | Per 100 |
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| 395 | **Beauty of Livermore.** Deep oxblood red with black blotch | $2.00 | $18.00 |
| 400 | **Cerise Beauty.** Many medium-sized flowers of rose-doree | 1.90 | 17.00 |
| 985 | **Fairy.** Dainty flowers, delicate, clear, "baby" pink | 2.00 | 18.00 |
| 30 | **Goliath.** Large brilliant scarlet | 2.50 | 23.00 |
| 790 | **Mrs. Perry.** The standard pink poppy, salmon-rose, suffused lilac | 1.80 | 16.00 |
| 281 | **Olympia.** Earliest, fully double, flame-scarlet overlaid golden-salmon | 1.90 | 17.00 |
| 500 | **Orientalis.** Massive clumps and flowers of orange-scarlet | 1.80 | 16.00 |
| 40 | **Perfection.** Large, well formed, jasper pink or light coral | 2.50 | 23.00 |
| 28 | **Perry's White.** Very large and shapely, the only pure white | 2.20 | 20.00 |
| 700 | **Princess Ena.** Small tulip-shaped flowers, bright coral-pink | 1.90 | 17.00 |
| 50 | **Proserpine.** Immense flowers on heavy stems, pure scarlet | 2.40 | 22.00 |
| 576 | **Royal Scarlet.** Medium flowers in great profusion, rich scarlet | 2.00 | 18.00 |
| 590 | **Sass Pink.** Very large, lovely flowers, delicate flesh-pink | 2.80 | 26.00 |
| 54 | **Trilby.** 26 inches. Impressive flowers of lustrous dark red, the bulkiest of all | 2.80 | 26.00 |
| 35 | **Wurtembergia.** Charming shape, glowing rose-red | 1.90 | 17.00 |

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NURSERYMEN, FLORISTS and SEEDSMEN

## AT CHICAGO HOME SHOW.

The Chicago home show, at the Coliseum, Chicago, April 19 to 27, was an exhibition of home building, home modernization, home interiors and gardens. The garden features were not numerous.

An old mill garden in the center and at one end of the main auditorium was designed and constructed by Charles S. Speicher, landscape architect, Evanston, Ill. Nursery stock was provided by the Simonsen's Nursery, Glenview, Ill., and a specimen blue spruce was provided by the Lilac Hills Nursery, Barrington, Ill.

Facing this garden was the organist's stand, which was surrounded by the Highland Park News garden, the work of F. D. Clavey Ravinia Nurseries, Deerfield, Ill. A landscaped area was designed and planted by C. L. Neal, Oak Park, Ill., with plants furnished by Harvey's Nurseries, Oak Park. Swain Nelson & Sons Co., Glenview, Ill., landscaped a central garden area. In a planting credited to the Midwest Horticultural Society were evergreens from the nursery of Eugene A. de St. Aubin & Bros., Inc.

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LEWIS NURSERIES, Inc. Roslyn, L. I., N. Y.

A. E. MATZUNSKY, of the A. E. Matzunsky Nursery, Colorado Springs, Colo., has moved to Oregon to take possession of his 14-acre farm near Molalla, which he purchased a year ago.

THE Newport Nurseries, Newport, R. I., have been awarded the contract for the landscaping at the new auditorium building of the Rhode Island School of Design, Providence.

# Florida Tests Camellia Varieties

*By R. J. Wilmot*

*Growers of camellias in all parts of the country will wish to aid in the project already started under R. J. Wilmot at the Florida agricultural experiment station, Gainesville, to straighten out the names and description of the numerous varieties in commerce, as well as to investigate diseases, insect pests and culture.*

Because of the increasing demand for camellias, Dr. H. Harold Hume suggested that the horticultural department of the Florida agricultural experiment station attempt to straighten out the confusion in their nomenclature. He was of the opinion that the only way this could be done was to bring the plants together from the different propagators and to grow and study them side by side. Because of the importance of the camellia as a garden and nursery plant and for the production of cut flowers in the greenhouse, this appeared a desirable thing to do. Accordingly several nurserymen were asked to coöperate, and November 9, 1939, the first plants were set out. Since then thirty or more propagators have coöperated in this undertaking.

Representative sections of the country are interested. The Pacific coast is represented by four of the larger growers, Louisiana by two, Georgia by four, South Carolina by three, Mississippi by one, Alabama by four, Florida by nine and New Jersey, Massachusetts and Connecticut each by a greenhouse grower. Numerous offers of cuttings for propagation also have come from individuals who have large collections.

The collection will include not only C. japonica and C. sasanqua, but as many other species of the genus camellia as can be obtained and other genera of the tea family, such as stewartia, eurya and gordonia. Efforts are being made to locate as many as can be found.

Technical descriptions are to be made of the plants and flowers, using a standard color chart for the colors. As the plants gain individuality, their habits of growth, such as form, type of branching, vigor, hardiness and ease of propagation, will be noted and eventually published in appropriate publications. Color photographs will be made periodically of the different varieties to record their variations.

It soon became apparent that it would be possible to extend the concept of the project materially without increase in expense. Soils in which healthy old trees are growing will be studied to determine their composition and reaction. As the number of plants becomes large enough, fertilizer experiments will be undertaken to determine the particular mixtures for best results.

As they appear, the different phases of insect and disease control will be investigated by the various specialists in these lines. In this regard, work has already started on the identification and control of a disease known to many under the name of dieback. One causal organism has been tentatively identified as a phomopsis, another as a diplodia, fungi which cause similar trouble on other plants. Tentative recommendations are to prune to live green wood and keep the plant covered with a copper fungicide such as Bordeaux or Flordo. The latter is more effective, because it remains on the plant longer than the former.

By getting plants from the widely separated areas mentioned before, it should be possible to eliminate much of the confusion among the various sections. This confusion has been due to the fact that importations were made to them all in the early days, and when the original names were lost the varieties were renamed either by subsequent owners or by nurserymen who recognized them as valuable. The confusion was increased by the fact that importations were made from the Orient to Europe and the United States and from Europe to the United States simultaneously, so that it was possible for a variety to have three names —the original Oriental name, a European name and an American name —and if the importations were made to different parts of this country, still other names were given. It is easy for us to see why one would not

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| 9000 | Ilex opaca, seedlings. 3 to 6 ins., 1-yr., tpl., bedded.. $25.00 per 1000. | | |
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| 6000 | Pieris japonica. Cuttings. 6 to 10 ins., 2-yr., tpl., field-gr. | .25 | .20 |
| 9000 | Rhododendrons, named hybrids. Grafted. 9 to 12 ins., 2-yr., tpl., field-gr. | .70 | .60 |
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| 9000 | Taxus Hicksii. Cuttings. 6 to 10 ins., 2-yr., tpl., field-gr. | .18 | .15 |
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| 9000 | Taxus Cuspidata, spreading. Cuttings. 6 to 10 ins., 2-yr., tpl., field-gr. | .18 | .15 |
| 9000 | Taxus Cuspidata, spreading. Cuttings. 8 to 12 ins., 3-yr., tpl., field-gr. | .25 | .20 |
| 3000 | Thuja pyramidalis. Cuttings. 6 to 9 ins., 1-yr., tpl., field-gr. | .12 | .10 |
| 3000 | Thuja pyramidalis. Cuttings. 9 to 12 ins., 3-yr., tpl., field-gr. | .25 | .20 |

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want to carry a prized plant under the name Chiyodo-nishiki or Yaye-Shiratama, and it is from just such cases that some of the synonymy has arisen.

Many plants have been given established names when the description tallied, according to the grower's opinion, with a description in one of the old books or catalogues. This is evidently the case with the variety Mrs. Abby Wilder, or Abby Wilder, current in the south, which is peoniform, white with pink stripes, called by one nurseryman a white Prof. Sargent, while, according to Wilder's own description, it is perfectly imbricated to the center. Halliday (1), for instance, does not mention the fact that it is imbricated, so that one trying to identify a flower from his lists could easily be mistaken. Another example is the variety known in the Mobile area as Victor Emanuel, which was named by one nurseryman Blood of China. The original plant is reported to have come directly from France and it was not until long after the death of the first owner that it began to gain popularity. Perhaps its true name may be found among importations made elsewhere.

After the synonymy is worked out, it will then be necessary to determine which of the names is correctly applied, and here is where the trouble will begin. There has not been a book published in this century which goes into detailed descriptions of the varieties, and the old works, such as Berlese, Verschaffelt and others, are scarce and at a premium. Unfortunately, the library here, because of its comparative youth, is practically lacking in such literature, and such publications can be used only by loan from some other library or some individual who is public-spirited enough to let these valuable books be used for a short time. Reference to them will be necessary, not only for the descriptions of the varieties, but also to determine the correct spelling of the names. There are today many variations in spelling in camellia literature. For instance, Mrs. Abby Wilder is spelled "Mrs. Abbey Wilder" by one prominent authority. Such material as is available is being searched for every mention of camellia to lay the foundation for the work to come.

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| Acer dasycarpum | $0.45 | $1.50 |
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| | ¼ lb. | 1 lb. |
|---|---|---|
| **Abies** arizonica | $1.75 | $6.50 |
| “ balsamea | .55 | 2.00 |
| “ concolor | .40 | 1.25 |
| “ homolepis | .45 | 1.60 |
| **Acer** palmatum, large seeded type | .70 | 2.50 |
| **Amelanchier** canadensis, d.b. | .65 | 2.35 |
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| **Cratægus** mollis, c.s. | .50 | 1.75 |
| **Cupressus** arizonica | .90 | 3.25 |
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| **Daphne** mezereum | 1.50 | 5.50 |
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| **Ilex** verticillata, d.b. | .35 | 1.25 |
| **Juglans** cinerea, dried | ... | .25 |
| “ nigra, hulled | ... | .25 |
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| **Plumbago** capensis, blue, per 1000 seeds, $3.30. | | |
| **Pseudotsuga** douglasi viridis (Wash.) | 1.20 | 4.20 |
| **Rhamnus** cathartica, d.b. | .35 | 1.25 |
| **Rhodotypos** kerrioides | .70 | 2.50 |
| **Rhus** canadensis, d.b. | .35 | 1.25 |
| **Robinia** pseudoacacia | .30 | 1.00 |
| **Rosa** blanda, dried hips | .40 | 1.40 |
| “ multiflora, thornless, c.s. | .45 | 1.50 |
| “ setigera, dried hips | .45 | 1.60 |
| **Shepherdia** argentea, d.b. | .55 | 1.85 |
| **Sorbus** americana, d.b. | .40 | 1.35 |
| **Stewartia** pentagyna, c.s. | 1.10 | 4.00 |
| **Taxodium** distichum | .35 | 1.10 |
| **Thuja** orientalis aurea | .80 | 2.75 |
| “ “ “ conspicua | .85 | 3.00 |
| **Tilia** americana | .25 | .85 |
| **Tsuga** canadensis | 1.65 | 6.00 |
| **Viburnum** acerifolium, d.b. | .35 | 1.25 |
| “ lantana, d.b. | .50 | 1.80 |
| **Wisteria** multijuga, blue | .45 | 1.50 |
| “ sinensis, blue | .25 | .75 |
| “ sinensis, white | .45 | 1.50 |
| **Zelkova** serrata | .25 | .80 |

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true names will be the greenhouses of the north, where stocks have been maintained for many years. W. H. Buffinton, of Fall River, Mass., (2) reported in The Florists' Review that he has plants around 100 years old that have been in the possession of the family for seventy-five years. Others report stocks that they have maintained for sixty or more years. Eventually we hope to contact others who may have stock that traces back to the original seedlings produced by Gunnell, Becar, Wilder, McKenzie and others, and any information along this line would be gratefully received.

A third source of information is stock from importations made in the memory of the owner, although a comparison of the catalogues of Bisschop (3) and Guichard (4) brings to light the fact that even European nurseries do not agree on descriptions nor even on the spelling of varietal names. Guichard has one variety listed as "Dan El Websber," which might sound all right to the French, but to us it looks as though it should be Daniel Webster and is probably of American origin.

Such a project can only succeed through the coöperation and assistance of all interested parties, and it is the hope of the department of horticulture that the interest will continue.

1. Halliday, R. J.—The Propagation and Culture of the Camellia Japonica, Baltimore, Md. 1880.
2. Buffinton, W. H.—Camellia experience cited. Florists' Review, LXXXVI, No. 2236:27. 1940.
3. Etablissement "Camellia." Victor de Bisschop. Catalogue. Tronchiennes, Belgium. 1938.
4. Etablissement Horticole. Guichard Soeurs. Catalogue. Nantes, France. N. D.

## WILL'S SIXTIETH YEAR.

The sixtieth anniversary of the founding of Oscar H. Will & Co., pioneer seed and nursery firm, Bismarck, N. D., was recently celebrated by officers and employees. Oscar H. Will purchased the business from E. M. Fuller in 1881, and the business has since remained in the Will family. George F. Will, son of Oscar Will, is now president.

Originally located at Fifth street and Avenue B, the firm now has a central warehouse at Fourth street and Rosser avenue and two additional warehouses. Two nurseries and a greenhouse range are also operated. Worth Lumry and George Bird are associated with Mr. Will in the management of the business.

## P. N. A. BULLETIN.

According to the decision taken at the annual meeting of the Pennsylvania Nurserymen's Association in February, a mimeographed bulletin is being sent to members at unstated intervals, the first number being issued in April. It contains a brief message by the president, J. Franklin Styer, a list of officers and committees and a couple of pages devoted to high lights of the annual meeting. The remainder of the 12-page bulletin carries recommendations and performance data on hardy asters, by Prof. E. I. Wilde, and flowering dates for woody plants at State College, compiled by R. P. Meahl, both of the department of horticulture at Pennsylvania State College, by which the bulletin is edited.

---

ERECTING a 31x74-foot show house, Larchmont Nurseries, Inc., Larchmont, N. Y., will display in it garden tools and supplies, seeds and bulbs, pot plants and cut flowers. A greenhouse, 35x50 feet, is almost completed. This firm does a noteworthy landscape business in Westchester county.

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GOODRICH RUBBER BUDDING STRIPS have been used with very good success by nurserymen.
Send for samples and prices on the quantity you will require for 1941 budding.
**THOMAS B. MEEHAN CO.**
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## OBITUARY.

### Lars Peter Jensen.

Lars Peter Jensen, manager of the arboretum at the Missouri Botanical Garden, Gray Summit, Mo., and for twenty-five years landscape gardener for homes and business properties of the Busch family, St. Louis, died April 23 at Barnes hospital, St. Louis. He was 71 years old.

Born in Denmark and trained in horticulture at Copenhagen, he came to the United States in 1891 and soon went to work for Adolphus Busch, of the Anheuser-Busch breweries, as a landscape gardener.

He became associated with the Missouri Botanical Garden in 1919, continuing this connection until his death, except for a 2-year period when he was in the retail florists' business with a son, Arthur. On his son's death, he rejoined the garden staff and had been manager of the arboretum since 1927. In 1920, he was president of the National Association of Gardeners. His widow survives.

### Edward H. Schwerin.

Edward H. Schwerin, of Schwerin's Nursery, San Francisco, Cal., died April 14. He was 69 and had

**FLOWERING CRABS**
Bench grafts for lining out.
$5.00 per 100. 10 or more at this rate.
**Arnoldiana**, very early pink.
**Bechtel's**, double pink.
**Eleyi**, semidouble, red.
**Floribunda**, single, carmine to white.
**Niedzwetzkyana**, red Russian, deep rose, reddish foliage, dark red fruits.
**Scheideckeri**, early pink, very profuse.

| **Fine Buddleia** | Per 100 |
|---|---|
| Young potted plants for lining out. | |
| **Dubonnet**, new rich wine-red | $12.00 |
| **Charming**, beautiful pink | 9.00 |
| **Eleanor**, new deep blue, fine | 9.00 |
| **Hartwegi**, large lavender | 8.00 |
| **Ile de France**, deep purple | 6.00 |
| **Magnifica Imp.**, violet, fine cut | 6.00 |
| **Red-leaf Jap. Barberry**, 9 to 12 ins. | 3.00 |
| **Hydrangea P. G.**, large-flowering type, 6 to 12 ins. | 3.50 |
| **Viburnum Opulus**, 9 to 12 ins. | 3.50 |
| **Am. Snowball**, 9 to 12 ins. | 3.50 |
| **Japan Snowball**, 9 to 12 ins. | 4.25 |

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spent fifty years in the nursery business. He is survived by his widow, five daughters and two sons.

### Clair L. Bishop.

Clair L. Bishop, head of C. Bishop's Nursery, Del Rosa, Cal., died April 10 from injuries suffered a month before, when a garage collapsed, burying him under heavy timbers. Despite his sixty-nine years, he insisted on working at the nursery, although the business was leased to Joseph Wright. Surviving is his sister, Miss Rowena Bishop. His wife died in December of last year.

### Ella G. Hopkins.

Ella G. Hopkins, wife of Thomas Roberts Hopkins, of Hopkins Nursery, Bothell, Wash., died recently at the home of a sister, Mrs. W. A. Brown, Highland. Born at Marysville, Cal., seventy-two years ago, she moved with her family to Northrup when she was 16. She is survived by her husband and four sons, Harold and Edward, who are associated with their father in the management of the nursery; Howard, Elkin, W. Va., and John, Ukiah, Cal.

### Arno B. Cammerer.

Arno B. Cammerer, 57, until about a year ago director of the national park service and since then director of its region 1, died April 30 of a heart attack. A native of Arapahoe, Neb., he lived in Michigan, Illinois and Wisconsin, and was appointed from Wisconsin to his first federal service as a bookkeeper in the treasury. In 1919 he became assistant director of the park service. He was named director in 1933 by Secretary Harold Ickes. His burial will be at Janesville, Wis.

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THE contract for providing the public works department of Pittsfield, Mass., with trees in its tree-line planting program this year has been awarded to Adams Nursery, Inc., Springfield, Mass.

SESSIONS for nurserymen and landscape men will be included in the program of the convention of the Louisiana State Horticultural Association, at the Heidelberg hotel, Baton Rouge, May 18 to 20, since the state has no separate organization of nurserymen.

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| **Juniperus virginiana glauca** | 2.75 | 25.00 |
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| **Juniperus virginiana Schottii** | 2.75 | 25.00 |
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| **Juniperus virginiana pyramidiformis** | 2.75 | 25.00 |
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| **Thuja orientalis elegantissima** | 2.00 | 18.00 |

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# This Business of Ours

*Reflections on the Progress and Problems of Nurserymen*

*By Ernest Hemming*

### SPRING.

Spring in the nursery is always a rather hectic time. This year there was no spring, but it was a hectic time just the same. In this part of the country, the Eastern Shore of Maryland, the weather jumped from winter into summer. At the present writing, April 21, the following are in full bloom: Forsythia, Japanese quince, peaches, apples, pearl bush, plum, cherry, dogwood, redbud, spiræa, daffodils, tulips, wisteria and others, all at one time. Normally, they form a succession of bloom over a period of a month or so, but a temperature up in the 80's for several days brought everything into leaf and flower within a week.

The pastel shades of color of the trees beggared description. The flowers and foliage of the maples, oaks and willows, all coming at one time, made a picture, fortunately for the nurserymen, as rare as it was beautiful. E. H.

### COLOR EFFECTS.

The nursery salesman who has had much experience in selling landscape planting to the ladies knows that when it comes to color schemes and effects he is usually up against it, especially when it comes to mixed plantings. However hard he tries, it is rare that the effect aimed at materializes. If a masterpiece is achieved, it is usually an accident.

The writer on Easter Monday saw such a one that was breath-taking. The planting took the form of a hedge effect between two properties. The original planting consisted of a row of single-stemmed dogwoods, Cornus florida, set about ten feet apart. They had developed into good uniform plants, fifteen to eighteen feet high. Later, in between them had been planted alternately Forsythia viridissima and Pyrus japonica of a pleasing red shade. These plants were from six to eight feet high and the whole in splendid proportion.

Such perfect timing of the flowering, the contrasting colors in the sunlight and the delicate tracery of the leafless dogwood twigs produced a picture which perhaps might well be described as a gardener's dream.

Of course, this superb landscape color effect was pure accident. The dogwoods were planted about fifteen years ago, being small collected plants from the local woods. The forsythia and pyrus were added about five years ago. If the dogwoods could have been in flower at the same time it would have been a miracle instead of an accident because the dogwood does not flower until about three weeks later. It does suggest, however, that a color scheme of redbud, Cercis canadensis, and dogwood might be a success. Anyhow, observations as to time of flowering are in order.

Speaking of color effects, or rather color clashes, as in the case of the Oriental poppy, which seems to clash with every color it is seen in combination with, by accident a mass of this was planted near a mass of Iris pallida dalmatica, a tall robust-growing lavender-colored iris. They both flowered at exactly the same time and proved a pleasing combination.

Most ladies express aversion to magenta shades of color, yet even these have beauty if seen in combination with white, but the most important factor in getting color effects with flowering plants is their timing so they will be in their prime all at the same time. E. H.

### JAP BEETLE TREATMENT.

It has been found as a result of further experiments with treatments for freeing nursery stock and potted plants from the immature stages of the Japanese beetle, that two and one-half pounds of methyl bromide per thousand cubic feet applied for a period of three and one-half hours at a temperature of not less than 57 degrees, or for three hours at not less than 60 degrees, is sufficient to kill such larvæ.

Accordingly instructions have been revised in B.E.P.Q. 499, supplement No. 1, third revision, to authorize the use of such treatments in addition to the four schedules provided for in the second revision of supplement No. 1 to the circular. Announcement of the revision was made April 11 by Avery S. Hoyt, acting chief of the federal bureau of entomology and plant quarantine.

**Azaleas,** fine collection of varieties.
**Taxus Ovata,** fine column-type yew.
**Cercis Canadensis Alba,** White Judas, rare.
**Pink-flowering Dogwood,** liners to specimen sizes.
**Lilacs,** large collection of hybrids and species.
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## TSUGA CANADENSIS PENDULA.

Tsuga canadensis pendula, the Sargent weeping hemlock, is one of the narrow-leaved evergreens that can be classed as a novelty. While it is an interesting variety of one of our best evergreens, it will not find extensive use in landscape plantings. Its unusual character, however, would seem to warrant its placement among the better narrow-leaved evergreens.

The history of the Sargent weeping hemlock concerns the finding, between 1865 and 1870, of four seedlings showing a decidedly weeping form, by Joseph Howland, of Dutchess county, New York. After these seedlings were transplanted, two grew, one on the premises of the finder at Beacon, N. Y., and the other in the garden of Charles S. Sargent, at Brookline, Mass. In 1939, these 75-year-old plants had attained a remarkable size. The one at Beacon, N. Y., was reported as being ten feet six inches high with an average breadth of thirty-three feet, and the one at Brookline, Mass., was six feet high with an average breadth of twenty-four feet.

Considerable variation is seen in the plants now grown as Tsuga canadensis pendula. Part is due to a definite variation and part to methods of training in the nursery. If a leader is not staked upright when the plant is young, it becomes much more prostrate than plants considered typical of the variety. One of the highest old specimens of weeping hemlock on record is the one in Fairmount park, Philadelphia, which is fifteen feet high and has a spread of thirty feet.

In typical form, the Sargent weeping hemlock has a flat, broad top and drooping branches. Plants are much wider than high. Foliage characteristics are similar to the species. The plant prefers a moderately acid, rich soil, containing ample moisture. It will stand full shade and sun if not in wind-swept situations or in extremely hot climates. It does best in the midwest in at least partial shade and should never be exposed to sweeping winds.

While cuttings of this plant have been rooted, the best commercial method of propagation is by grafting. It will find its use as lawn specimens and for foundation planting if kept restricted. L. C. C.

**"By all standards the outstanding shade tree book published in the past thirty years ....."**

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By P. P. PIRONE
**Associate Professor of Plant Pathology at Rutgers University**

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6. CAVITY TREATMENTS
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8. TREES SUITABLE FOR STREETS AND ROADSIDES
9. DIAGNOSING TREE TROUBLES
10. NON-PARASITIC INJURIES
11. INSECT CONTROL
12. SPRAYING EQUIPMENT AND PRACTICES
13. TREE DISEASES AND THEIR CONTROL
14. GENERAL PARASITIC DISEASES
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Illustrated with about 200 original photographs and line drawings. 15 pages of exhaustive bibliography. 424 pages.............................. $4.50.

**OXFORD UNIVERSITY PRESS**
114 Fifth Avenue New York

# Diseases of Trees

*Gleanings from the Latest Reports of Scientific Research*

*By Leo R. Tehon*

## RESISTANT RED CEDAR.

After twenty years of observation and experiment, announcement has just been made by Anthony Berg, West Virginia college of agriculture, Morgantown, W. Va., of the finding of a red cedar, Juniperus virginiana, almost immune to the attack of the common cedar rust fungus. The tree is now being propagated on a large scale so as to make it available for distribution and testing in different sections of the country.

In 1921, after having observed that heavily rust-infected cedars often stood next to cedars with little or no rust infection, Mr. Berg began to investigate the cause of the apparent difference in susceptibility. In a large cedar grove so located that all trees in the grove were subjected to uniform possibilities of infection, he selected several pairs of trees, labeled them with brass tree markers and kept an annual record of the amount of rust infection that occurred. He selected the tree pairs in such a way that one tree in each pair showed a high degree of susceptibility to rust attack while the other showed only slight or no infection.

Records covering these tree pairs were kept continuously over a period of sixteen years. During this period, with only a few exceptions, the trees selected at the beginning for their susceptibility continued to display marked susceptibility, while the trees originally selected because they appeared resistant to rust continued resistant and showed only slight infection during the years under observation.

A certain tree, designated "16D" in the original notes, proved most resistant of the entire lot of observed trees, having had only two rust galls develop on it during the sixteen years. The other tree of its pair, designated "22X," showed considerable infection each year. These two and a third tree, "66D," which was moderately susceptible to infection, were used for further tests.

Scions were taken from these three trees, grafted, grown for a year in the nursery and then transplanted in the midst of an apple orchard annually bearing a maximum of rust infection. Here the young grafted trees stood for four years, annually exposed to the greatest possible extent to infection.

During the four years of exposure young trees developed from scions of the susceptible tree "22X" became so heavily infected that all of them died. Trees from scions of the moderately susceptible tree "66D" became infected and were seriously injured. Trees from scions of the resistant tree "16D" proved, on the other hand, to be highly resistant to rust infection and only occasionally bore a few rust galls.

As a result of this performance it seems safe to assume that under natural conditions scion progeny from this resistant red cedar would not become a menace to apple orchards. The tree also offers possibilities for landscaping purposes where red cedars are now objectionable because of their tendency to propagate and spread rust to other ornamental trees.

## GRAFTING SOUR CHERRIES.

Experiments performed at the United States horticultural station, at Beltsville, Md., and recently reported by E. A. Siegler and J. J. Bowman indicate that the cost of spraying Mazzard seedlings lined out for budding can be avoided if bench grafting is resorted to for propagation of sour cherry varieties.

Although in the north central states Mahaleb stock best withstands climatic conditions, Mazzard stock is still desirable for the coastal regions of both the Pacific and Atlantic states, since it produces a larger and longer-lived tree in the orchard. As is well known, however, propagation of cherry varieties by budding on Mazzard stock is limited by cherry leaf spot infection (the fungus concerned is Coccomyces hiemalis). This disease attacks Mazzard seedlings so readily that under average conditions numerous spray applications are necessary for even partial control. Generally, sufficient defoliation results from the leaf spot attack to make budding operations on Mazzard stock partial or complete failures.

For their experiments Siegler and Bowman collected scion wood in the late fall from 2-year nursery trees, made grafts relatively early in the season (February 1), stored the

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| Extra heavy specimens | Per 100 | Per 1000 |
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| 6 to 8 ins., B.R. specimens...... | $18.00 | $160.00 |
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| 10 to 12 ins., B&B, ex. heavy spec. | 65.00 | 600.00 |
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| 14 to 16 ins., B&B, ex. heavy spec. | 110.00 | 1000.00 |
| 16 to 18 ins., B&B, ex. heavy spec. | 125.00 | 1150.00 |
| 18 to 20 ins., B&B, ex. heavy spec. | 150.00 | 1350.00 |
| 20 to 22 ins., B&B, ex. heavy spec. | 175.00 | 1500.00 |

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| 3 to 4 ft......... | $27.00 |
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| **Cotoneaster acutifolia,** 8 to 12 ins. | $0.03 |
| **Cotoneaster acutifolia,** 12 to 18 ins. | .04 |
| **Rosa setigera,** 12 to 18 ins. | .01½ |
| **Rhamnus Frangula,** 18 to 24 ins. | .01½ |
| **Rhus aromatica,** 8 to 12 ins. | .02 |
| **Viburnum Opulus,** 12 to 18 ins., X | .04 |

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| Balsam Fir, 2 to 4 ins. | $2.00 | $12.00 |
| Douglas Fir, 2 to 4 ins. | 2.00 | 9.00 |
| Douglas Fir, 4 to 6 ins. | 2.00 | 11.00 |
| Douglas Fir, 6 to 8 ins. | 2.50 | 16.00 |
| Blue Spruce, 2 to 4 ins. | 3.00 | 18.00 |
| Norway Spruce, 2 to 3 ins. | 1.00 | 4.00 |
| Norway Spruce, 3 to 6 ins. | 1.50 | 7.00 |
| Scotch Pine, 2 to 4 ins. | 1.00 | 8.00 |
| Scotch Pine, 4 to 6 ins. | 1.50 | 11.00 |
| Ponderosa Pine, 2 to 3 ins. | 1.00 | 8.00 |
| Ponderosa Pine, 3 to 6 ins. | 1.50 | 11.00 |
| Jack Pine, 4 to 8 ins. | 1.00 | 6.00 |
| White Pine, 2 to 3 ins. | 1.00 | 8.00 |
| White Pine, 3 to 6 ins. | 1.50 | 11.00 |

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grafts at about 45 degrees Fahrenheit, a temperature low enough to prevent bud pushing, and planted the grafts about April 10. As rootpiece cuttings they used both the top cut from the collar region of the root and cuts taken about three inches below the collar of Mazzard seedlings. In several years' experience they found that better stands were obtained from grafts made from the top cuts of the roots.

With the Early Richmond variety, whip-and-tongue grafted to top cuts, they obtained a sixty-eight per cent survival of their grafts and trees averaging twenty-two inches high at the end of one year. With the Montmorency variety, similarly grafted, they obtained a fifty-eight per cent survival and trees averaging seventeen inches high at the end of one year.

As to the commercial application of the grafting method, these men are of the opinion that stands obtained under commercial conditions would rarely exceed sixty per cent, but that a stand of fifty per cent probably would be satisfactory because of the great saving in expense for the spraying of budded Mazzard seedlings. Grafting, they believe, also avoids the hazards in budding operations due to weather conditions, protects the relatively tender seedling part of the tree by placing it about six inches below the ground and affords opportunity for the development of scion roots which are generally considered relatively hardy. Moreover, to the orchardist there would be the advantage of the larger and longer-lived tree that develops on Mazzard roots. L. R. T.

---

THE arrival of Ann Elizabeth, March 24, daughter of Mr. and Mrs. Stephen Verhalen, made a grandfather of Ray P. Verhalen, of the Verhalen Nursery Co., Scottsville, Tex.

PURCHASE of property on the McLoughlin superhighway south of Milwaukie, Ore., at Risley avenue, near Portland, has been made by the Lamb Nurseries, Spokane, Wash. Plans have been made for moving the entire stock to the Clackamas county location. This concern was established about twenty-five years ago, and does a large mail-order trade in hardy plants.

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| 2-yr., 2 to 4 ins., sdlgs. | $1.25 | $10.00 |
| 2 to 4 ins., X | 3.50 | 30.00 |
| 4 to 6 ins., X | 4.25 | 38.00 |
| 6 to 8 ins., XX | 5.50 | 50.00 |
| **Colorado Blue Spruce** | | |
| 2 to 4 ins., X | 3.00 | 25.00 |
| 4 to 6 ins., X | 4.00 | 35.00 |
| **Austrian Pine** | | |
| 3-yr., 6 to 8 ins., sdlgs. | 2.75 | 22.50 |
| 6 to 8 ins., X | 5.50 | 48.00 |
| 8 to 10 ins., X | 8.00 | 75.00 |
| 12 to 15 ins., XX | 12.00 | .... |
| **Scotch Pine** | | |
| 2-yr., 3 to 6 ins., sdlgs. | 1.00 | 8.00 |
| 10 to 12 ins., X | 6.00 | 55.00 |
| **Mugho Pine** | | |
| 3-yr., 3 to 5 ins., sdlgs. | 3.25 | 27.50 |
| 2 to 4 ins., X | 4.50 | 40.00 |
| 4 to 6 ins., X | 6.50 | 60.00 |
| **Silky Dogwood** (Cornus Amomum) | | |
| 6 to 9 ins. | 1.00 | 8.00 |
| 9 to 12 ins. | 1.25 | 10.00 |
| **Alternate-leaved Dogwood** | | |
| 6 to 9 ins. | 1.75 | 15.00 |
| **Arrowwood** (Viburnum Dentatum) | | |
| 2 to 4 ins. | 1.00 | 8.00 |
| 4 to 6 ins. | 1.25 | 10.00 |
| 6 to 9 ins. | 2.00 | 17.50 |

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# Reviews of New Books

## "HORTUS SECOND."

Those who have employed "Hortus" in the decade since it appeared need little more than notification that "Hortus Second" has come from the press to welcome its appearance. As an up-to-date reference book of gardening and general horticulture it is unrivaled. The wide knowledge and careful accuracy of its compilers, Dr. Liberty Hyde Bailey and his daughter, Ethel Zoe Bailey, are well known.

To say that "Hortus Second" contains 778 pages, as compared to 755 in "Hortus," or to mention that the page size has been increased, from 6½x9¾ inches to 7x10 inches, provides too little comparison. The larger page size permits wider typesetting of the two columns per page, and the volume has been reset throughout in new type faces, which are not only more readable, but permit considerable more matter to the line.

The comparison would be clearer by mention that "Hortus Second" contains 3,332 main separate articles against 2,881 in the former work, 2,961 genera against 2,722 and 5,496 varieties against 3,974. Altogether, the new work contains 31,905 garden binomials and trinomials against 23,526 in the older work.

For those unacquainted with the work, let it be said that "Hortus Second" is not just a botanical record. It is designed to account for all the species and botanical varieties of plants in cultivation in the continental United States and Canada in the past decade, together with brief directions on uses, propagation and cultivation. Containing common names, descriptive terms and definitions, inventories of families of plants and abundant cross references, the volume is a thorough, as well as concise, dictionary of gardening. Botanical definitions are brought up to date, as is the nomenclature.

Anyone who has to do with plant names will want this reference book for verification. Those interested in the identification of plants will find it indispensable. The large amount of general information, as to types of propagation, in addition to botanical descriptions, makes this book of much value to commercial growers of plants and those in allied lines.

Bound in a stiff brown fibroid cover, this latest horticultural work from the press of the Macmillan Co. sells at $12.

## MAINTENANCE OF TREES.

From the inquiries of readers, the editor can echo the statements of A. Robert Thompson that "for many years there has been a crying need for an authoritative professional text on the care and preservation of shade trees." With equal truth can Mr. Thompson be quoted further: "Dr. Pirone has met that need capably. 'Maintenance of Shade and Ornamental Trees' is a 'must' for the working library of every arborist, city forester, park superintendent and tree warden interested in any of the many phases of modern tree preservation practice."

No higher source can be quoted in this connection, because the pamphlets which A. Robert Thompson prepared as forester of the National Park Service have for several years been recommended when up-to-date information was desired on tree care.

"Maintenance of Shade and Ornamental Trees" is written by Dr. P. P. Pirone, associate professor of plant pathology at Rutgers University, editor of the monthly bulletin, "Nursery Disease Notes," and secretary of the New Jersey Association of Nurserymen. His acquaintance with trees and their care is too well known to most nurserymen to require elaboration here.

Because his work in this field made plain to him the need of an up-to-date and authoritative work, he set about to fill the gap. The volume of over 420 pages which has just come from the Oxford University Press, at $4.50, is not a compilation of material on tree care. It is written from the original observation and the thorough study of one intensely interested in the subject. It will bear reading as a matter of general information, and it will long serve as a reference book because of the specific data for diagnosis and control of diseases and insect pests on numerous species of trees and shrubs. The illustrations, made from about 200 original photographs and line drawings, add much to the book's value.

The volume is in two parts. The first is a description of general maintenance practices. After a brief introductory chapter on the botanical structure of a tree, successive chapters deal with the soil, transplanting and fertilizers. Three chapters follow of special interest to arborists, on pruning trees and treating wounds, cavity treatments and bracing and cabling trees. The final chapter of this part discusses the qualifications of the

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ideal street tree and species suitable for streets and roadsides.

The second part is twice as long as the first and is devoted to specific abnormalities of trees. Instruction is given in diagnosing tree troubles. Injuries from other sources than insects and diseases are clearly described. Insect control is covered in one chapter and spraying equipment and practices in another. Tree diseases and their control and general parasitic diseases are generally discussed in following chapters. Then street and roadside trees, deciduous ornamental trees and some shrubs, evergreen trees and shrubs are listed in alphabetical order with the diseases and insect pests noted that do damage to each kind. Illustration and description make possible diagnosis, and control measures are indicated.

An 18-page bibliography will be welcomed by those who wish to follow any subject farther, and an equally full index makes possible the most thorough use of the book. It deserves a place in every nurseryman's business library, particularly if he is engaged in tree planting or tree care.

## NEW PLANT PATENT.

The following plant patent was issued April 22, according to information received from Rummler, Rummler & Davis, Chicago patent lawyers:

No. 462. Hybrid tea rose. Adolph E. Gude, Rockville, Md., assignor to A. Gude Sons Co., Inc., Washington, D. C. A new and distinct variety of hybrid tea rose, characterized primarily by its large blooms of a clear deep rose color, its vase-shaped bud and its free and vigorous growth.

LEASING forty acres of land and greenhouses formerly operated by the Pfund Bell Nursery Co., two former employees, Thomas H. Lange and Henry Koop, formed a partnership March 1, 1941, and are operating as Lange & Koop, Elmhurst, Ill.

HENRY KRAAK joined with Peter A. Chopin in celebrating fifty years in business by entertaining the New Orleans Horticultural Society at the Cotton Club, New Orleans, La., April 17. After early training in Germany and some experience in other European countries, Mr. Kraak came to the United States in 1902. After working at the St. Louis world's fair, he went to New Orleans, where he was first a gardener and subsequently one of the city's leading nurserymen.

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**Cornus Alba Sibirica**
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**Buckthorn Cathartica**
**Honeysuckle Pink Tatarica**
**Lilac, Common Purple** and **Persian**
**Philadelphus, Grandiflorus, Pyramidal** and **Lemoinei**

**TREES**
**Ash, American Green** and **White**
**Ash, European Mountain**
**Birch, American White**
**Elm, American**
**Hackberry**
**Poplars, Bolleana, Lombardy**
**Willow, Niobe Weeping**
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| **Forsythia,** 3 to 4 ft. | 15.00 |
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| **Amoor River North Privet,** | |
| 12 to 18 ins. | 3.00 |
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All Privet heavy branched.

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6-in. pots 18 to 30 ins. high....$50.00 per 100

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# Letters from Readers

### IN FAVOR OF LEWISIA.

After reading the April 1 issue, I feel moved to protest at one statement in D. R. Metzger's otherwise good article on selecting the best perennials. It is difficult to understand why Mr. Metzger should consider the lewisia as a particularly difficult plant, and as therefore to be passed by, so far as nurserymen's listings are concerned.

We find the lewisia particularly suited to eastern American conditions. We have but little difficulty with it and grow many species at our nursery. Neither do we see any reason why the home planter should not succeed with them if he will provide their rather simple cultural needs. They are American plants and adapt themselves well to American conditions. Quite certainly the average home gardener is much more likely to succeed with them than he is with trollius, mentioned by Mr. Metzger as one of the easier perennials that should be featured.

Rex. D. Pearce.

### GINKGO OLD IN AMERICA.

On page 12 of your April 15 issue it was mentioned that the ginkgo is a native tree of China.

A few years ago I joined a party of fruit growers that toured the western states to the coast. The tour was conducted by the American Pomological Society and started from St. Louis, Mo.

At one place we stopped, in Arizona or Nevada or one of those western states, we saw petrified walnut, ginkgo and other trees that were said to have been buried for thousands of years. Perfect imprints of the ginkgo leaves are in evidence there at this time.

Dr. Samuel Edgcomb, of Ames, Ia., had charge of this trip and by contacting him you will be more fully informed and can verify my statement.

John Rick.

### FOR BETTER PLANTING.

I have read with interest Mr. Porter's article on "Landscape Planning and Planting" in the April 15 issue. This series should be helpful, particularly if Mr. Porter deals with the problem of developing appreciation for better planting among homeowners. Obviously the men who do pioneering work in better planting will have to do so at somewhat of a sacrifice.

Better planting requires not only the ability to make better plantings, but a stock of trees and plants suitable for immediate effect. I am satisfied that there are a considerable number of landscape men and firms which have the qualifications. The unsolved part of the problem seemed to be the lack of sufficient appreciation of good planting to bridge the gap between the cost of cheap slap-bang jobs and design plantings. Progress is being made in this direction.

George Jennings,
New Jersey Foresters.

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E. H. MOEHLENBROCK has opened a nursery store at 2618 Nicollet avenue, Minneapolis, Minn. Adjoining the salesrooms is a building, 50x70 feet, providing storage space.

### FOR LACE BUG, RED SPIDER AND SCALE INSECTS.

The control of lace bug on azaleas and rhododendrons, juniper scale, oyster-shell scale, euonymus scale and red spider on evergreens is a simple matter provided the grower employs the proper spray at the proper time.

For the lace bug, spray immediately after blooms of azaleas and rhododendrons fall. It is at this time that infestation can be detected by examining both surfaces of the leaves. If infested, the upper surface of the leaf will be discolored, and on the underside of the leaf, the nymphs and adults will be seen feeding. Severe infestations may cause the leaves to become almost white and many will dry out completely and drop. An ideal spray solution for this pest is composed of one pint C. P. O. Liquid (soap), one ounce Black Leaf 40 and ten gallons water. This spray should, of course, be applied carefully on the undersides of the leaves.

Red spider attacks spruce, arborvitæ, hemlock, juniper and many varieties of deciduous trees, such as ash, elm, larch, maple and walnut. An infestation will cause foliage to be-

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| Cornus lutea (Goldentwig), 2 to 3 ft. | .10 |
| Honeysuckle, fragrant, 2 to 3 ft. | .10 |
| Honeysuckle, Morrowi, 2 to 3 ft. | .10 |
| Philadelphus coronarius, 2 to 3 ft. | .10 |
| Symphoricarpos Chenaultii, 2 to 3 ft. | .10 |

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| 3 to 4 ft., br. | $2.00 | $3.50 | $12.50 |
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| No. 1, 3/16 to ¼-in., strong | 15.00 |
| No. 2, 2/16 to 3/16-in., strong | 12.50 |
| No. 3, about 2/16-in. | 10.00 |

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come brown and dry. The same spray mixture as for lace bug applied with heavy pressure will afford a good kill, and sprayed plants will not retain objectionable residue as when lime-sulphur is used. As there are many generations each year, repeated sprays at regular intervals should be applied from early May to early fall. The red spider becomes abundant in warm dry atmosphere and particularly during drought periods.

For lilac scale, euonymus scale, juniper scale and pine-leaf scale, although dormant oil sprays are generally satisfactory, it is not always considered good practice to apply miscible oils when plants are covered with young tender foliage. For the grower who did not find time to apply a dormant spray, the following mixture is excellent: One quart C. P. O. Liquid (soap), one ounce Black Leaf 40 and ten gallons water. This spray should be applied during the period from May 15 to about June 10. It is during this period that the overwintering eggs are hatched and the crawling young scale insects can be seen on the new tender plant tissue.

If these newly hatched insects are not eradicated within the foregoing mentioned period, then control will be more difficult because of the protective coating or scale which develops on the insect. Above all, do not expect any spray to perform miracles. If you meet the insecticide manufacturer halfway by ordering your spray on time and using it as directed, then there is no reason why all your nursery stock should not be insect-free.

## MEET AT LOS ANGELES.

The Southern California Horticultural Institute met at the Mayfair hotel, Los Angeles, April 17. Dr. Ralph H. Smith, professor of entomology, spoke on "The Sycamore Scale in California." Dr. Arnold Mallis gave a talk on "Interesting Facts about Ants." Both lectures were illustrated and well received by the audience.

Before the regular meeting, woman members gathered to organize an auxiliary. Mrs. Chester Swift was chosen chairman. Mrs. Peggy Jewell was chosen general chairman of the auxiliary's flower show committee. This group met with the Women's

**Items You May Need**

500 Birch, Cutleaf Weeping, 8 to 10 ft.
200 Birch, Cutleaf Weeping, 1¼ to 1½-in.
1,000 Elm, American, 8 to 10 ft. (root pruned 1939)
700 Elm, American, 1¼ to 1½-in. (root pruned 1939)
150 Ginkgo, 5 to 6 ft.
200 Ginkgo, 6 to 8 ft.
175 Ginkgo, 8 to 10 ft.
50 Ginkgo, 1¼ to 1½-in.
300 Maple, Norway, 2½ to 3-in.
1,000 Maple, Norway, 3 to 3½-in.
800 Maple, Norway, 3½ to 4-in.
2,000 Maple, Norway, 4 to 4½-in.
All Maple transplanted, 7x7 ft.
500 Willow, Thurlow, 8 to 10 ft.
400 Willow, Thurlow, 10 to 12 ft.
250 Willow, Thurlow, 1½ to 2-in.
1,000 Juniper, Pfitzer's 18 to 24 ins. Sheared, compact.
800 Juniper, Pfitzer's 2 to 2½ ft. Sheared, compact.
300 Juniper, Pfitzer's, 2½ to 3 ft. Sheared, compact.
9,000 Montmorency Cherry, 1-yr., 11/16-in.
14,000 Montmorency Cherry, 1-yr., 9/16-in.
5,000 Montmorency Cherry, 1-yr., 7/16-in.
1,300 Montmorency Cherry, 1-yr., 5/16-in.
8,000 Elberta Peach, 7/16-in.
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## EXHIBIT AT SAN JOSE, CAL.

The Central Counties Garden Association, Inc., staged its second annual show April 11 to 13, at San Jose, Cal., including exhibits from local nurseries.

Vetterle & Reinelt, Capitola, received first prize for delphiniums. W. B. Clarke & Co., San Jose, placed first for flowering cherries and second for landscaping. Clyde H. Stocking, of the Rosedale Nursery, San Jose, received first for his display of a single rose variety, winning with Mme. Henri Guillot, this year's popular introduction.

V. Fred Oppl, San Jose, received first for Dutch irises and landscaping. Leonard Coates Nurseries, Inc., San Jose, received first prizes for landscaping, for a collection of Kurume azaleas and for ornamentals.

Herbert Stockton, San Jose, again made a feature of California natives, herbaceous plants and shrubs.

Ruehl-Wheeler Nursery Co., San Jose, brought in from its fields many interesting specimens of new and old roses, gaining a first award.

The Nelson Floral Gardens, with falls and shrubbery as background, placed first with a model miniature garden, featuring hydrangeas and azaleas in bloom in the foreground.

An outdoor patio, with white garden furniture in a modern setting, was used by Leonard Coates Nurseries, Inc., for its garden exhibit.

The California Nursery Co. built its second-prize garden scene around a white colonial door.

Japanese flowering cherries were a high spot in the garden display of W. B. Clarke nursery.

Tree peonies, in which Toichi Domoto, Hayward, is doing excellent work, were shown with maples, flowering crab apples and azaleas, Mr. Domoto taking blue ribbons for landscaping, tree peonies and Kurume azaleas.

The West Coast Nursery staged a rose garden with a background of ornamentals.

Navlet's Nursery, San Jose, had a rustic scene in which it displayed some interesting new gerberas and ornamentals.

## WESTERN SHADE TREE CONFERENCE PROGRAM.

The eighth Western Shade Tree Conference will be held May 15 to 17, at San Jose, Cal., the home town of the president, Ray D. Hartman, president and manager of the Leonard Coates Nurseries. Headquarters will be at the Sainte Claire hotel, and meetings will be held at the municipal auditorium.

At the opening session, Thursday morning, May 15, Dr. P. Victor Peterson, president of the city planning commission of San Jose, will speak on "The Development of a Street Tree Planting Plan and Ordinance for the City of San Jose." In a diagnosis clinic will take part W. S. Rowland, Willis Wagener, Dr. E. O. Essig and Edward H. Scanlon.

In the afternoon, color films on "Horticulture of New Zealand and Dutch East Indies" will be shown by Keith L. Davey, general manager of the Davey Tree Expert Co.

"Specimen Trees" will be the subject of Albert Wilson, garden consultant, Palo Alto, Cal., and "Trees and Traffic," of Leslie Mayne, arboriculturist, San Mateo, Cal.

The bleeding canker disease will be the subject of discussion Friday morning, May 16, a paper on the general subject to be presented by Dr. Frank L. Howard, of Rhode Island State College, and a paper on the disease in California by Pierre Miller, of the University of California at Los Angeles. "Recent Studies in the Control of Sycamore Scale" will be the subject of Ralph H. Smith, professor of entomology at the University of California at Los Angeles.

In the afternoon will be a tour, a demonstration by exhibitors and a visit to the factory of the Bean Manufacturing Co. The banquet and election of officers will be held in the evening.

The closing session, Saturday morning, May 17, will be devoted to a clinic, in which the members of the panel and their subjects will be as follows: Dr. H. E. Burke, entomology; Leroy Abrams and Woodbridge Metcalf, varieties of trees; Frank L. Nolan, tree problems; L. R. Cody and Lloyd Maynard, general, and Ray D. Hartman, production.

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A NURSERY has been opened by Guilford Russell at Broadway and Burke, Arlington, Wash.

## WASHINGTON NOTES.

Fred W. May, May Nursery Co., Yakima, was taken to the hospital April 20. The nature of his illness was undetermined.

The Yakima valley is recognized as the outstanding area for growing apple, pear, cherry and other seedlings. Equitable climate, irrigation, long growing period and frost produce ideal seedlings. Conservatively speaking, it is estimated that over eighty-five per cent of the seedlings grown in the United States originate in this territory. The May Nursery Co. has completed shipping 2,500,000 seedlings this spring.

Vic Kallin, formerly with the C. Malmo Nursery, Seattle, is now in charge of the landscape department of the C. & O. Nursery, Wenatchee. The C. & O. Nursery has completed the landscaping of the Twin Falls and Caldwell, Idaho, migratory camps.

W. G. Sattree and Andres Gorund, Seattle, exhibitors at the national flower show, reported to the police thefts of approximately $100 in exhibits at the closing of the show. The exhibitors said that their displays were missing when they went to remove them from the showroom.

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inspector, staged the daffodil show at Sumner, which was a glorious success. About 500 varieties were displayed, and many were new varieties. Exhibitors were Van's Bulb Farm, I. C. Orton, United Bulb Co., George Lawler, H. F. Gronen, C. W. Orton, Van Zonneveld Bros., Van Zanten Bulb Co., A. N. Kanouse and J. H. McLean.

Steuber Floral & Nursery Co., Snohomish, is exceedingly busy landscaping a project at Ellensburg.

A 20-acre field of King Alfred daffodils of Van Zanten Bros., Inc., Lynden, was a magnificent sight.

Avery H. Steinmetz, of the Portland Wholesale Nursery Co., Portland, Ore., paid Seattle and vicinity a speedy visit last month.

The northwest bulb growers report the condition of this year's bulb crop highly satisfactory because of the mild winter.

A 2-story frame building, 40x60 feet, erected by the State Flower Nursery, Bothell, adjacent to the railroad, permits prompt shipping of azaleas and rhododendrons. Truckloads of azaleas are unloaded on the ground floor, graded, moved to the second floor, where wrapping and boxing take place, and then finally moved into auto railroad cars for shipment.

The C. Malmo Nursery, Seattle, has erected a display platform, 50x100 feet, adjoining the office building at the Twenty-third street branch.

Weather conditions in this section have been ideal for growing conditions, ensuring a good crop next fall.

Wenatchee's twenty-second apple blossom festival was held April 17 to 19 and, like its colorful predecessors, drew thousands of visitors to the blossom-laden Wenatchee valley. Washington and neighboring states paid friendly tribute to the pioneers of central Washington, who were responsible for converting the barren hillsides and valleys into rich fertile orchards.

Victoria, B. C., holds its annual spring garden festival, under the auspices of the Victoria Horticultural Society and the Empress hotel, from April 30 to May 3.

The growers of the north central district of Washington will appear before a session of the Transcontinental Freight Bureau, a group of western railway freight departments, at Chicago, and are determined to obtain a reduction in rail-

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road freight rates on apples to eastern markets. They will have the support of the United States Department of Agriculture through the Regional Agricultural Credit Corporation. A year ago President Roosevelt, when told that the apple business was steadily growing worse, designated the whole region as a distress area, in order to make possible emergency crops financing out of government funds. A government financing and rehabilitation program is under way. The apple industry is sick. Foreign markets have collapsed, and the increased cost of operation has already resulted in the reduction of apple orchards from one-fourth to one-third of their peak acreage. The department is determining whether a one-crop area can be rescued and made prosperous again by careful supervision, inexpensive and benevolent financing, group purchasing and shrewd marketing. W. L. Fulmer.

## ROSE REGISTRATIONS.

The American Rose Society's registration committee has approved applications for registration of the following roses. Notice of these registrations has been sent to rose organizations in foreign countries and trade papers. If no objections are raised before June 3, 1941, the registration of these names will become permanent as of that date, states R. Marion Hatton, secretary.

**Apricot Queen.** Hybrid tea. Said to be a seedling of an unnamed seedling and Wilhelm Breder. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1940. Plant is described as vigorous, with a long-pointed bud and large, full flowers of thirty-five petals. Color apricot with open petals, verging to cyclamen-pink. Moderate fragrance.

**Burgundy.** Hybrid tea. Reported as a seedling of Vaterland x a red seedling. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1940. Plant is described as vigorous, with long-pointed buds and large, double flowers of a uniform Burgundy-wine color. Moderate fragrance.

**California.** Hybrid tea. Reported as a seedling of Miss Rowena Thom x Lady Forteviot. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1940. Plant is described as vigorous, with long-pointed buds and large, open flowers of forty petals. The color deep orange with a shading of Saturn rose at edge of petals. Strong fragrance. Flowers borne singly. Claimed to be distinct.

**Climbing Carrie Jacobs Bond.** Climbing hybrid tea. A sport of Carrie Jacobs Bond, discovered by Howard & Smith, Montebello, Cal., and introduced by them in 1940. Plant is described as a vigorous climber, with abundant, leathery foliage; long-pointed buds, and large, full flowers of many petals. The color dark coral-rose, with strong fragrance. The flower is a replica of that of the bush form.

**Contrast.** Hybrid tea. Reported to be a seedling of an unnamed seedling x Talisman. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1937. Plant is described as vigorous, with long-pointed buds and large, full flowers with thirty-five petals. The color orange-rose face with a milk-white reverse. Moderate fragrance. Claimed to be distinct from any other variety in commerce at present.

**Crown of Gold.** Hybrid tea. Claimed to be a seedling of an unnamed seedling x Joanna Hill. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1937. Plant is described as vigorous, with long-pointed buds and large, full flowers of forty petals. The color yellow, fading to primrose. Moderate fragrance. Claimed to be an improvement on Joanna Hill.

**Heart's Desire.** Hybrid tea. Reported to be a seedling of an unnamed seedling x Crimson Glory. Originated by Howard & Smith, Montebello, Cal., and to be introduced by them in 1942. Plant reported as vigorous, upright, with long-pointed buds and large flowers, high-centered, double and with thirty petals. The color uniform crimson-scarlet. Intensely fragrant. Claimed not to blue with age.

**Indian Summer.** Climbing hybrid tea. Reported to be a seedling of Ednah Thomas x Autumn. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1937. Plant is reported as a vigorous climber, with abundant, leathery foliage and long-pointed buds opening to large flowers of many petals. The color orange, shaded old rose, with moderate fragrance. Claimed to be a distinct improvement over any bicolored climber.

**Major Shelley.** Hybrid tea. Reported to be a seedling of an unnamed seedling x Crimson Glory. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1937. Plant described as vigorous, with long-pointed buds and large, high-centered flowers of thirty petals. The color a uniform rich crimson-scarlet. Strong fragrance. Claimed to be a better upright plant than Crimson Glory, which it resembles in color.

**Mrs. Georgia Chobe.** Hybrid tea. Reported to be a seedling of Miss Rowena Thom x Renault. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1937. Plant is described as vigorous, with long-pointed buds and large, full flowers of thirty-five petals. The color a uniform soft pink, with moderate fragrance.

**Mrs. Mabel V. Socha.** Hybrid tea. Reported to be a seedling of an unnamed seedling x Souvenir de Claudius Pernet. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1935. Plant reported as vigorous, the bud ovoid, and open flower of medium size with a high center and thirty-three petals. The color is lemon-yellow, fading lighter with age. Moderate fragrance. Claimed to be a distinct shade of lemon-yellow.

**Mrs. Paul J. Howard.** Climbing hybrid tea. Reported as a seedling of Paul's Lemon Pillar x Miss Rowena Thom. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1937. Plant is reported as a vigorous climber, with abundant, leathery foliage; long-pointed buds, and large, full flowers of forty petals. The color crimson, and the fragrance strong. Claimed to be an intensely fragrant rose of outstanding crimson color and marvelous size.

**Santa Anita.** Hybrid tea. Reported a seedling of unnamed seedlings. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1942. Plant is reported as of moderate growth, upright and bushy, with average hardiness. The bud is medium-size, long-pointed, with large, high-centered flowers of thirty petals. The color soft, satiny pink, with moderate fragrance. Flowers borne singly. Claimed to be an exceedingly fine color. Quite distinct and a free bloomer.

**Tango.** Hybrid tea. Reported as a seedling of an unnamed seedling x Talisman. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1940. Plant reported as vigorous and upright. Long-pointed buds and medium-size flowers of thirty to thirty-five petals. The color vermilion-scarlet, with a bronze reverse. Moderate fragrance. Claimed to be distinct.

**Will Rogers.** Hybrid tea. Reported to be a seedling of an unnamed seedling x Hadley x Crimson Glory. Originated by Howard & Smith, Montebello, Cal., and introduced by them in 1938. Plant is reported as vigorous and upright. Ovoid bud opening to moderate-size, flat flowers with forty ruffled petals. The color velvety maroon, the flower intensely fragrant. Claimed to be distinct from all other roses and preëminent in the intense fragrance.

**Fair Maid.** Hybrid tea. Reported as a sport of Talisman discovered by Peirce Bros., Waltham, Mass., and introduced by them in 1941. Plant described as a strong grower, stronger than the parent, with large, ovoid buds and urn-shaped, 4 to 5-inch flowers with sixty to seventy-five petals. The color between begonia-rose and Eugenia-red with empire-yellow base. Tea fragrance. Claimed to be a better plant than that of its parent, with intense, enduring tea fragrance and distinctive blended coloring.

**Aviator Parmentier.** Hybrid tea. Reported as a seedling of an unnamed seedling x Briarcliff. Originated by Jac Verschuren-Pechtold, Haps, Holland, and introduced by John Parmentier, Bayport, N. Y., in 1941. Plant is reported as strong and hardy, with long-pointed buds and large, full, high-centered flowers of thirty to thirty-five petals. The color deep peach pink orange. Moderate fragrance. Flowers borne singly and freely. The color is claimed to be new, the plants resistant to black spot and not taking mildew at all.

**Franklin D. Roosevelt.** Hybrid tea. Reported as a sport of Betty Uprichard, discovered by H. L. McClung, Tyler, Tex., and introduced by him in 1939. Plant reported vigorous and hardy, the bud oblong with 3 to 3½-inch open flowers of twenty to thirty-five petals. The color red, with sweet fragrance.

## WINDY WEATHER INJURY.

The sudden and rather complete wilting of thousands of evergreens in New Jersey and southeastern New York state during the last week in March and the early part of April caused much concern. Commenting on it in the March issue of "Nursery Disease Notes," Dr. P. P. Pirone, of the department of plant pathology of the New Jersey agricultural experiment station, concludes that extremely windy weather without any rainfall was the cause, after reference to weather bureau reports.

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Since new leaf buds appeared on many plants of wilted Rhododendron maximum by early April, he concluded that many of them would survive. Since no new leaf buds were noted on hybrid rhododendrons, the outcome was difficult to predict. Application of one of the new wax or rubber compounds to decrease leaf transpiration was advised where wilting had not been severe enough to produce complete drying of the foliage. No cutting back was recommended until the extent of damage could be determined later in the season.

In conclusion Dr. Pirone stressed the importance of placing rhododendrons in unexposed sites. Heavy mulches of oak leaf mold or acid peat moss to prevent deep freezing and thus to facilitate water absorption by the roots would also be of great assistance in avoiding this type of injury.

Severe injury to narrow-leaved evergreens was the subject of comment by Dr. E. Porter Felt, of the Bartlett tree research laboratories, Stamford, Conn. The most severe injury, as was to be expected, occurred on recently transplanted trees, on those with inadequate root systems and in localities where poor soil or exposure accentuated the drying conditions of the numerous sunny days in March and early April. In other words, the unusual weather conditions drew the moisture from the leaves faster than the roots could supply it, especially as many of these were in frozen soil in the early part of this period. Had there been several days of rain or a prevailing humid atmosphere, there would have been much less damage.

The greatest injury was on arborvitæ, red cedars and white pine, said Dr. Felt; in some cases red pine was seriously affected, though in this last other factors may have been involved to some extent. The white pine in the light, sandy soils of western Long Island shows the injury most frequently. Many small hemlocks were badly dried. Here and there the smaller broad-leaved evergreens, such as laurel and andromeda, suffered.

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## BROAD-LEAVED EVERGREENS.

[Continued from page 12.]

green leaves varying from two and one-half to six inches in length. The leaves turn a rich purple color in winter when exposed to sun. Its fragrant, white, bell-shaped flowers, borne in axillary and terminal drooping clusters, are attractive in April or May. It prefers a moist, acid, peaty soil and partial shade. The drooping leucothoë is a satisfactory plant for informal mass planting or as single specimens in beds or borders. It combines well with rhododendrons and other ericaceous plants. It is fine for cutting at Christmas time. Its tendency to become leggy with age can be controlled by trimming and removal of the old wood to the ground level. It transplants and establishes itself readily. Leucothoë axillaris is less hardy and does not seem to possess characteristics to commend its use.

*Mahonia aquifolium,* Oregon holly-grape, is one of the best broad-leaved evergreens for alkaline soil regions. It is a native of the territory from British Columbia to Oregon and ranges in height from about three to five feet. It is upright-spreading in its habit of growth, the stems bearing compound, dark green, leathery and spiny-toothed leaves, which turn a deep bronze color in the fall or early winter. The foliage varies from glossy to a dull green color. While the glossy-leaved form is the more desirable, the dull-leaved form may be used advantageously in mass plantings to a lesser extent. Flowers are yellow, produced in April, and the blue fruits are showy in August and September.

It prefers moist but well drained soils and should be given partial shade, especially during the winter months, to prevent leaf burn. It is not particular as to soil type, but it should be trimmed severely occasionally to prevent its becoming leggy. It is hardy in zone 5. It will find its use as a specimen, for mass planting or in combination with other broad-leaved evergreens.

Here might be the place to mention Mahoberberis neuberti and its variety latifolia, the latter formerly erroneously listed as Berberis ilicifolia. These plants are only semi-evergreen and of rather poor growth habit and deserve no higher rating than the discard list in the locality under consideration.

*Pieris japonica,* Japanese andromeda, where hardy, is one of our most beautiful broad-leaved evergreens. This upright-spreading shrub from Japan may attain a height of ten feet, but seldom is above four to five feet. It is listed as being hardy in zone 5, the same as Mahonia aquifolium, but it hardly seems so hardy in northeastern Ohio. When compared with Pieris floribunda, our native andromeda discussed in the preceding article, the Japanese andromeda has more obovate and glossy leaves and more drooping flowers. The flowers are white, in pendulous clusters, and are in bloom in April or early May. The flower buds add an interesting note during the winter months.

The Japanese andromeda requires the same cultural requirements as the rhododendrons. It will find its use as a specimen or border plant and should be used extensively where

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hardy. Pieris japonica pygmaea, a dwarf form, and Pieris taiwanensis, which is apparently less hardy, are placed on the secondary list for further trial.

*Pyracantha coccinea pauciflora,* small-flowered firethorn — The species, Pyracantha coccinea, usually attains a height outside the limits of this size group. However, there is a variety, Pyracantha coccinea pauciflora, grown in our locality which is usually within this size group. Most plantsmen are familiar with the Laland firethorn, also outside the limits of this group. When compared with the Laland firethorn, Pyracantha coccinea pauciflora differs from it by being a smaller, more compact and rounded shrub, producing much fewer flowers and fruits. Its outstanding characteristics are its formal habit of growth and its hardiness. It produces white flowers in May and orange-red fruits sparingly in the fall, which if given some protection may persist nearly all winter. It will thrive in almost any soil and either sun or partial shade. It transplants with difficulty, other than from pots or severely root-pruned specimens, and is subject to fire blight. It has been reported that while it blights badly in sun, plants used in shade are relatively free from this trouble. It can be used as a formal specimen and for mass planting, and it makes a fine hedge. It grows rapidly and stands trimming readily.

It is not possible in the limited space devoted to these discussions to cover the rhododendrons completely. All I can hope to do is to mention some of the best ones within this size group and to stress a few points in regard to their culture. While their specific soil and exposure requirements almost prohibit their use in some sections, nevertheless, they must have the selected rating.

*Rhododendron carolinianum,* Carolina rhododendron, a native of North Carolina, is usually a low compact plant of four or five feet or less in height. The leaves are from two to three inches in length and densely brown-dotted beneath. The leaves do not have the tendency to roll so much as most of the hybrid rhododendrons in cold weather. The rosy-pink flowers are produced in May, about the same time as the lilacs. It is hardy in zone 5 and prefers a well drained acid soil that is fairly moist. It should be trimmed severely to

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| 2¼-in. pots | 7.00 | 60.00 |
| BUXUS: | | |
| Harlandii, dwarf boxwood; Sempervirens: | | |
| Rooted cuttings | 6.00 | 50.00 |
| 4 to 6 ins., once transplanted | 8.00 | 65.00 |
| 6 to 8 ins., once transplanted | 10.00 | 80.00 |
| EUONYMUS Japonicus: | | |
| Rooted cuttings | 4.00 | 30.00 |
| 2¼-in. pots | 6.00 | 50.00 |
| 6 to 9 ins., once transplanted. | 8.00 | 60.00 |
| 9 to 12 ins., once transplanted. | 10.00 | 80.00 |
| GARDENIA Radicans: | | |
| 2¼-in. pots | 8.00 | 60.00 |
| JASMINE, Floridum: | | |
| 9 to 12 ins., once transplanted. | 8.00 | 60.00 |
| CHERRY LAUREL: | | |
| 4 to 6 ins., once transplanted | 5.00 | 40.00 |
| LEUCOPHYLLUM Texanum: | | |
| 2 -in. pots | 10.00 | 80.00 |
| 2¼-in. pots | 12.00 | 100.00 |
| 2½-in. pots | 15.00 | 120.00 |
| LIGUSTRUM Lucidum: | | |
| Rooted cuttings | 5.00 | 40.00 |
| 2½-in. pots | 10.00 | 80.00 |
| PYRACANTHA Coccinea, | | |
| Coccinea Lalandi, | | |
| Microphylla, | | |
| Yunnanensis: | | |
| Rooted cuttings | 4.00 | 30.00 |
| 2-in. pots | 8.00 | 60.00 |
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keep it compact. It is attractive as a specimen, foundation, border or rock garden plant.

*Rhododendron carolinianum album,* the white Carolina rhododendron, is considered to be superior to the species as a landscape plant by some plantsmen.

*Rhododendron catawbiense,* Catawba rhododendron, a native of the mountains of Virginia and Georgia, is a spreading shrub up to six feet in height, sometimes higher, with large leaves and lilac-purple flowers in May or June. Its soil requirements are similar to Rhododendron carolinianum, and it is useful as a specimen, border or foundation plant. Rhododendron catawbiense compactum is described as a variety of compact habit and slow growth.

*Rhododendron hybrids*—Many hybrid evergreen rhododendrons are listed, and it is exceedingly difficult to choose the most desirable. The hybrids differ in their satisfaction in different localities, and personal likes and dislikes also play a part in choice. No doubt many new hybrids, possibly of other species, will be introduced that will be more satisfactory than anything we have at present.

Among the better varieties are: White — album elegans, Boule de Neige, catawbiense album; pink-rose—Lady Armstrong, Mrs. Charles Sargent, roseum elegans; red-scarlet-crimson — atrosanguineum, Charles Dickens, Ignatius Sargent, Dr. Dresselhuys; lavender-purple — everestianum and purpureum grandiflorum.

Mrs. Charles Sargent is considered by many to be the best of all the hybrid rhododendrons available.

Some of the salient points applying to the culture of rhododendrons and other broad-leaved evergreens are:

1. Select hardy plants. Use either native types or hardy hybrids.

2. Locate the beds with a northern or eastern exposure if possible and give partial shade. Keep away from wind-swept situations.

3. Excavate bed areas to two feet. Provide ample drainage and build a soil bed three to four inches above normal grade.

4. Select a light loam soil that is acid in reaction.

5. Supply liberal quantities of humus by incorporating, and adding as a mulch, acid peat moss or half-rotted oak leaves. In poor soils additional fertilization is necessary. An important point to consider in the fertilization is that the soil must be acid. Any fertilizers that contain lime or materials that will raise the pH of the soil should not be used. Organic fertilizers such as soybean or cottonseed meal are satisfactory for small plants. Applications are made at the rate of five to six pounds per hundred square feet. In poor soils, a 10-6-4 fertilizer in which soybean or cottonseed meal is used to supply one-half to three-fourths of the nitrogen is especially satisfactory. This complete fertilizer may be applied at the rate of two to three pounds per hundred square feet. It is best to water the fertilizer in immediately after application.

6. To maintain an acid reaction, add finely ground sulphur or aluminum sulphate. The amounts of these acidifying agents to add per hundred square feet will depend upon the soil test. This will usually be from three to five pounds of sulphur or double this amount of aluminum sulphate.

7. Maintain a cool, moist soil by providing partial shade and mulches.

8. Provide some protection in the winter from hard drying winds and excessive sun exposure. Mulch heavily.

9. Roots of most broad-leaved evergreen plants are located near the surface of the soil and should not be disturbed. Mulch rather than cultivate. The mulch should be stirred occasionally during the summer.

10. Be sure that the plants are supplied with sufficient water before the ground freezes in the fall; never let them go into the winter in a dry condition. Spray as necessary to control injurious insects and diseases.

Two other rhododendrons are placed in the secondary list. Rhododendron mucronatum (Azalea ledifolia), an upright-spreading shrub with white flowers, is of limited use. A number of varieties are listed. Rhododendron przewalski is rare, but needs further trial. Here, also, might be mentioned Rhododendron obtusum kaempferi and the Kaempferi hybrids. While the torch azalea and its varieties are usually considered as deciduous or semievergreen types, they are often preferred to the Kurume azaleas because of their hardiness and less exacting cultural requirements. Rhododendron lu-

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tescens is rare and doubtfully hardy.

The remaining plants on the secondary list need brief comment.

Cotoneaster lactea is a species of recent introduction, having white flowers and small, rounded red berries produced in large clusters. It should be hardy in the region under consideration and deserves further trial. Cotoneaster pannosa is a semievergreen type similar to Cotoneaster francheti and has red fruits. It is doubtfully hardy. It is said to be one of the best for the upper south.

Cowania stransburiana is a shrub of the rose family with fragrant white flowers. This native of the west should be hardy in well drained soil and sunny exposures in zone 5.

Euonymus kiautschovica (patens) possibly deserves a higher rating, but I feel it has been overemphasized. Its main use is as a low clipped hedge. For small specimens, Euonymus fortunei carrierei and vegeta are better. Euonymus kiautschovica reaches a height of ten feet at maturity, although it is usually smaller. Considerable confusion exists in the trade as to what constitutes Euonymus fortunei carrierei. A form of Euonymus kiautschovica is often carried under this name. Euonymus kiautschovica, the spreading euonymus, has a larger, thinner leaf with a more wavy margin, and the blade tapers to and is decurrent on the petiole. The plant is only semievergreen. The surest way to tell it from the Euonymus fortunei varieties is to observe its flowering period. It flowers in August or September, while Euonymus fortunei and its varieties flower in June or July. The flowers of Euonymus kiautschovica are attractive to flies, more so than those of Euonymus fortunei carrierei and vegeta.

Kalmia latifolia obtusata is a variety of the mountain laurel described as being of slow growth and of compact habit and having rounded, slightly smaller leaves.

Ligustrum quihoui is a plant for the upper south with spreading, rigid branches, small leaves and late white flowers. It should be useful for border planting and for hedges.

Myrica cerifera pumila is a variety of the wax-myrtle, attaining a height of about five feet, and has shown some promise in the upper south.

Nandina domestica, a native of central China and Japan, is an upright, loosely spreading shrub from four to six feet in height, with com-

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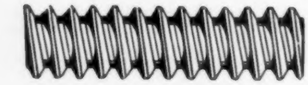

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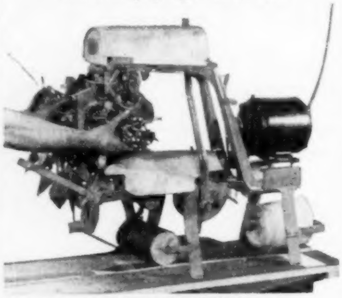

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pound leaves. The leaves are reddish when unfolding and purplish-red in early fall. Its most outstanding characteristic is its bright red fruits in terminal clusters holding most of the winter. It has proved hardy in a few places in Ohio along the Ohio river.

Osmarea burkwoodi, a recent introduction, is a hybrid of Phillyrea decora and Siphonosmanthus delavayi. It is compact in its habit of growth and has dark, glossy green leaves about one and one-half inches long. The flowers are white in terminal clusters in April or May. It is hardy in zone 6 and deserves trial.

Sarcococca hookeriana and Sarcococca ruscifolia are attractive evergreen shrubs of the box family, having handsome foliage and white flowers. Sarcococca hookeriana has black fruits, and Sarcococca ruscifolia has dark scarlet fruits. Both are listed as being hardy in zone 7. The latter is reported doing well in Virginia.

Siphonosmanthus (Osmanthus) delavayi is a compact shrub with small (one inch or less) shiny leaves and small white fragrant flowers in April. It is reported as hardy in zone 7 and should do well in the upper south.

Skimmia japonica is a spreading shrub of about four feet in height, with attractive foliage, fragrant white flowers and bright red fruits. It is hardy in zone 7.

Viburnum japonicum, one of the attractive southern viburnums, has large lustrous leaves and fragrant flowers. It is hardy in zone 7. Viburnum utile is a spreading shrub of slender branches and loose habit. The leaves are small, usually about an inch or an inch and one-half long, and glossy dark green. The flowers are white. It has proved to be practically hardy except in severe winters at Columbus, O. Here might be mentioned Viburnum burkwoodi, a hybrid of Viburnum carlesi and Viburnum utile. It is semievergreen and has already been discussed with the deciduous plants. It has outstanding merit with its spreading habit of growth, attractive foliage similar to Viburnum utile and its highly fragrant flowers as is typical of Viburnum carlesi. It is perfectly hardy in our territory.

The next of this series of articles will discuss the broad-leaved evergreens in group V, those ranging from six to nine feet in height.

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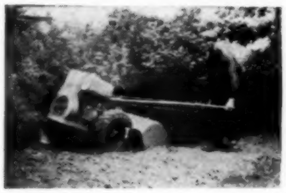

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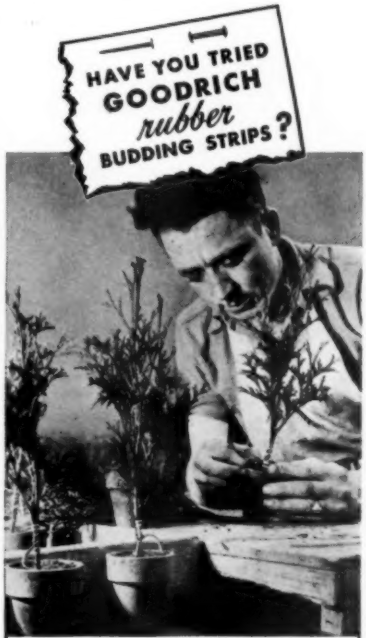

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